

**ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
REPEALING, RENUMBERING, RENUMBERING AND AMENDING,
AMENDING, REPEALING AND RECREATING AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to repeal NR 406.04(2)(f)3. and 3m., (4)(a)4., 423.04, 445.02(3), (9) and (9m), 445.05(6)(g) and (7), 445.06(2), (3) and (5) and 468.20(1)(b) Note; to renumber NR 406.04(2)(f)4. and (4)(a)6., 445.02(1), (2), (5), (9g), (10) and (11), 445.07, 445.08 and 448.02(1); to renumber and amend NR 406.04(4)(a)5., 445.02(4) and 445.06(title) and (1) and (4); to amend NR 400.02(95), 406.04(2)(f)1. and (3)(a) and (c), 406.07(2), 407.03(1)(sm)(intro.) and (2)(d), 407.05(4)(c)1., 9.a. and b. and 10., Table 2 (title) of NR 407.05, 407.09(1)(c)1.b., 407.14(1)(intro.), (1m)(intro.), 410.03(2)(g), 419.07(4)(b)3., (6)(a)1.b. and (7)(b), 422.03(1)(a), Note, (b), Note and (4)(a), 423.035(1)(a), Note, (b) and Note, 438.03(1)(a) and (b), Table 1 (title) of NR 438.03(1), 439.03(4)(a)1., 445.01(1)(a), 445.01(2), 445.02(intro.), 445.02(8)(intro.), 445.03, 445.04 (title), 445.04(1)(intro.) and (a)2., 445.04(2) (intro.), 445.04(3)(a) and (b), 445.04(4)(intro.) and (a)2., 445.04(4r)(a), 445.04(5)(a) and (b), 445.04(6)(a), 445.05 (title), (1)(a)2. and (4)(a)2., 446.02 (intro.), 447.02 (intro.), 448.02 (intro.), 449.02 (intro.), 484.04(23), 484.05(1) and 484.11(2)(b); to repeal and recreate NR 406.04(2)(f)2., 445.01(1)(b), 445.04(7) and 445.05(8); and to create NR 400.02(45e), (61g), (61r) and (162)(wm), Table 3 of 407.05, 407.14(1)(e), 407.14(1m)(e), 410.04(2)(b)5. and 6, 438.03(1)(am), Table 2 of NR 438.03(1), 439.045, 445 Subchapter I (title) preceding s. NR 445.01, 445.01(1)(b) Note, 445.02(2), (4), (5), (9), (10), (13) and (14), 445 Subchapter II (title) preceding s. NR 445.04, 445.04(intro.), 445.05(intro.), 445 Subchapter III (title) preceding s. NR 445.06 and 445.06 to 445.13, 445.14(2) and (3), 448.02(1) and 484.11(2)(c) and (8)(b), relating to the control of hazardous air contaminants.

AM-34-02

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 227.11(2)(a), 285.11(1), 285.17, and 285.27(2), Stats.

Statutes interpreted: ss. 285.11(10), 285.13(5), 285.17, 285.27(2), 285.63(4), 285.64, 285.67, and 285.69, Stats.

Regulations designed to protect the public from hazardous air contaminants were adopted by the Natural Resources Board and became effective in October of 1988. These regulations included permit requirements in chs. NR 406 and 407, annual emission inventory requirements in ch. NR 438 and emission standards and compliance requirements in ch. NR 445 for over 400 hazardous air contaminants. Previous revisions to these regulations were adopted by the Board in 1991 and 1994 to incorporate the results of a special studies, and to add emission standards for hazardous air contaminants known to cause chronic, non-carcinogenic health effects.

This proposed order will both revise existing requirements and set new standards, permit and emission inventory reporting requirements for 148 hazardous air contaminants from stationary sources. This order will also improve the existing regulatory system and provide new alternative methods for demonstrating compliance. It requires new and modified sources to meet requirements upon startup and includes a compliance schedule for existing sources.

The goal of this action is twofold. First and foremost, it is to ensure that the public is adequately protected from the adverse health effects from hazardous air contaminants by using up to date scientific and medical information. Secondly, it reduces the overall regulatory burden for sources and the department by making the regulations easier to understand and clarifying expectations while streamlining the administrative process.

SECTION 1. NR 400.02(45e), (61g) and (61r) are created to read:

(45e) "Compression ignition internal combustion engine" means an engine design with operating characteristics significantly similar to the theoretical diesel combustion cycle. The absence of a throttle to regulate intake air flow for controlling power during normal operation is indicative of a compression ignition engine. Combustion of the fuel in the engine proper is indicative of an internal combustion engine.

(61g) "Environmental management system" or "EMS" means an organized set of procedures that conforms with international standard ISO14001, incorporated by reference in s. NR 484.11(8)(b), or that is determined by the department to be functionally equivalent to ISO 14001 which is used to evaluate environmental performance and to achieve measurable or noticeable improvement in that environmental performance through planning and changes in operations, based on a commitment to superior environmental performance.

(61r) "Environmental management system audit" means a review of an environmental management system that is conducted in accordance with standards and guidelines issued by the international organization for standardization and the results of which are documented and communicated to employees of the participant.

SECTION 2. NR 400.02(95) is amended to read:

NR 400.02(95) "Maximum theoretical emissions" means the quantity of air contaminants that theoretically could be emitted by a stationary source without control devices based on the design capacity or maximum production capacity of the source. When determining annual maximum theoretical emissions, a source shall be presumed to operate 8,760 hours per year unless its physical design precludes 8,760 hours of operation per year. Where a source's physical design restricts the number of hours it may operate, annual maximum theoretical emissions shall be calculated taking this restriction into account. In determining the maximum theoretical emissions of VOCs for a source, the design capacity or maximum production capacity shall include the use of raw materials, coatings and inks with the highest VOC content used in practice by the source. In determining the maximum theoretical emissions of a hazardous air contaminant for a source, the design capacity or maximum production capacity shall include the use of raw materials, coatings, inks and fuels with the highest hazardous air contaminant content used in practice by the source. Realistic operating conditions shall be taken into account in determining emissions under this subsection.

SECTION 3. NR 400.02(162)(wm) is created to read:

NR 400.02(162)(wm) Perchloroethylene (Tetrachloroethylene)

SECTION 4. NR 406.04(2)(f)1. is amended to read:

NR 406.04(2)(f)1. The maximum theoretical emissions from the source for any hazardous air contaminant listed in ~~Table 1 or Table 4~~ Table A, B or C of s. NR 445.04 s. NR 445.07 are not greater than the emission rate listed in ~~Table 1 or Table 4~~ in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.04 s. NR 445.07 for the air contaminant for the respective stack height.

Note: Owners and operators of facilities emitting less than 3 tons of volatile organic compounds and 5 tons particulate matter on an annual basis, or who engage in limited or no manufacturing activities, should refer to s. NR 445.10 prior to determining applicable requirements under this section.

SECTION 5. NR 406.04(2)(f)2. is repealed and recreated to read:

NR406.04(2)(f)2. The maximum theoretical emissions from the source for any hazardous air contaminant listed in Table A, B or C of s. NR 445.07 are greater than the emission rate listed in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 for the air contaminant for the respective stack height and the source satisfies all of the following conditions:

- a. The hazardous air contaminant is not subject to a control requirement in s. NR 445.07(1)(c), (2)(b), (3) or (4).
- b. The source is not subject to s. NR 445.09(3)(a)2. or (c).
- c. The owner or operator of the source has certified that the source will be in compliance with all applicable requirements in subch. III of ch. NR 445 beginning on the date the source commences operation. This certification shall be made in accordance with s. NR 445.08(6)(b).
- d. The owner or operator of the source shall keep records adequate to demonstrate compliance with the applicable requirements in subch. III of ch. NR 445. These records shall be maintained in accordance with s. NR 439.04(1) and (2) beginning the date the source commences operation.

Note: The certification under subd. 2.c. should be submitted to: Wisconsin Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707, Attention: New/Modified Source NR 445 Certification.

SECTION 6. NR 406.04(2)(f)3. and 3m. are repealed.

SECTION 7. NR 406.04(2)(f)4. is renumbered NR 406.04(2)(f)3.

SECTION 8. NR 406.04(3)(a) and (c) are amended to read:

NR 406.04(3)(a) For the purpose of determining emissions under sub. (2)(f), the owner or operator of a source may rely on information on an approved material safety data sheet if the approved material safety data sheet lists a hazardous air contaminant listed in Tables 1 to 5 Table A, B or C of s. NR 445.04 s. NR 445.07 and the for any hazardous air contaminant listed with a standard expressed as an ambient air concentration in Tables 1, 2, 4 Table A, B or 5 C of s. NR 445.04 s. NR 445.07 constitutes 1% (10,000 parts per million) or more of the material or the for any hazardous air contaminant listed with a standard expressed as a control requirement in Table 3 A, B or C constitutes 0.1% (1,000 parts per million) or more of the material. If an approved material safety data sheet for a material is not classified as proprietary and does not list a hazardous air contaminant in Tables 1 to 5 Table A, B or C of s. NR 445.04 s. NR 445.07 at or above the amounts listed in this paragraph, the material will be presumed not to result in emissions of a hazardous air contaminant unless a hazardous air contaminant is formed in processing the material.

(c) For the purpose of determining emissions under sub. (2)(f), the owner or operator of a source is not required to consider indoor fugitive emissions in calculating emissions of any substance with a standard expressed as an ambient air concentration in Table 1, 2, 4 A, B or 5 C of s. NR 445.04 s. NR 445.07.

SECTION 9. NR 406.04(4)(a)4. is repealed.

SECTION 10. NR 406.04(4)(a)5. is renumbered NR 406.04(4)(a)4. and amended to read:

NR 406.04(4)(a)4. The use will not result in a violation of any emission limit in chs. NR 405, 408, 409, and 415 to 436 and 445.

SECTION 11. NR 406.04(4)(a)6. is renumbered NR 406.04(4)(a)5.

SECTION 12. NR 406.07(2) is amended to read:

NR 406.07(2) If a source undergoes a modification which is exempt from the requirement to obtain a construction permit under s. NR 406.04(4), it will not be treated as a modified source for purposes of the emission limitations under chs. NR 400 to 499 with the exception of the emission limitations in subch. III of ch. NR 445.

SECTION 13. NR 407.03(1)(sm)(intro.) is amended to read:

NR 407.03(1)(sm)(intro.) The following procedures for the remediation or disposal of soil or water contaminated with organic compounds, provided the potential to emit, considering emission control devices, for any hazardous air contaminant listed in Table 4 A to Table 5 C of s. NR 445.04 s. NR 445.07 is not greater than the emission rate listed in Table 4 A to Table 5 C of s. NR 445.04 s. NR 445.07 for the air contaminant at the respective stack height, the procedure is not a major source and the procedure is not subject to any standard or regulation under section 111 or 112 of the act (42 USC 7411 or 7412):

SECTION 14. NR 407.03(2)(d) is amended to read:

NR 407.03(2)(d) The maximum theoretical emissions from the source for any hazardous air contaminant listed in Table 1, 2, 3, 4 or 5 A, B or C of s. NR 445.04 s. NR 445.07 do not exceed the emission rate listed in the table for the hazardous air contaminant for the respective stack height.

Note: Owners and operators of facilities emitting less than 3 tons of volatile organic compounds and 5 tons particulate matter on an annual basis, or who engage in limited or no manufacturing activities, should refer to s. NR 445.10 prior to determining applicable requirements under this section.

SECTION 15. NR 407.05(4)(c)1. is amended to read:

NR 407.05(4)(c)1. The maximum theoretical emissions of all air contaminants from all emissions units, operations and activities except for those exempted under subd. 9. or 10. Fugitive emissions from emissions units, operations and activities shall be included in the permit application in the same manner as stack emissions, regardless of whether the source category in question is included in the list of sources contained in the definition of major source. Maximum theoretical fugitive emissions shall be calculated using average operating conditions and average weather conditions. Only sources which manufacture, treat or process dispose of pesticides, rodenticides, insecticides, herbicides or, fungicides or pharmaceuticals shall include emissions of air contaminants identified as pesticides, rodenticides, insecticides, herbicides and fungicides falling within these categories in Table 2, or Table 3

for calendar years 2004 and later, in their permit applications. When preparing its application, the owner or operator of a facility may rely on information in an approved material safety data sheet. Trace contaminants need not be reported if they constitute less than 1% (10,000 parts per million) of the material, or 0.1% (1,000 parts per million) of the material if the air contaminant is listed with a control requirement in Table 3 A, B or C of s. NR 445.04 s. NR 445.07, unless a hazardous air contaminant is formed in processing the material.

SECTION 16. NR 407.05(4)(c)9.a., and b. are amended to read:

NR 407.05(4)(c)9.a. Any emissions unit, operation or activity that has, for each air contaminant, maximum theoretical emissions which are less than the level specified in Table 2, or Table 3 for calendar years 2004 and later. Multiple emissions units, operations and activities that perform identical or similar functions shall be combined in determining the applicability of the exemption under this subparagraph.

b. If the maximum theoretical emissions of any air contaminants listed in Table 2, or Table 3 for calendar years 2004 and later from all emission units, operations or activities at a facility are less than 5 times the level specified in Table 2, or Table 3 for calendar years 2004 and later, for those air contaminants, any emissions unit, operation or activity that emits only those air contaminants.

SECTION 17. NR 407.05(4)(c)10. is amended to read:

NR 407.05(4)(c)10. For any emissions unit, operation or activity that is included in the application, the applicant does not need to include information on any air contaminant if the maximum theoretical emissions of the air contaminant are less than the level for that air contaminant listed in Table 2, or Table 3 for calendar years 2004 and later, or if the maximum theoretical emissions of any air contaminant listed in Table 2, or Table 3 for calendar years 2004 and later, from all emission units, operations or activities at a facility are less than 5 times the level specified in Table 2, or Table 3 for calendar years 2004 and later, for that air contaminant. Multiple emissions units, operations and activities that perform identical or similar functions shall be combined in determining the applicability of this exemption.

SECTION 18. Table 2 (title) of NR 407.05 is amended to read:

Table 2
Levels of Air Contaminants for Determining Need for Inclusion in Permit Applications

for Calendar Years 2003 and Earlier

SECTION 19. Table 3 of NR 407.05 is created to read:

Table 3
Levels of Air Contaminants for Determining Need for Inclusion in Permit Applications
for Calendar Years 2004 and Later

Air Contaminant Name	Sources of Regulation (See Footnote Below)	CAS Number	Inclusion Level (lbs/yr)
Acetaldehyde	2, 3	75-07-0	80.8
Acetamide	2	60-35-5	2,000
Acetic acid	3	64-19-7	1,155
Acetic anhydride	3	108-24-7	982
Acetone Cyanohydrin, as CN	3	75-86-5	1,070
Acetonitrile	2, 3	75-05-8	2,000
Acetophenone	2	98-86-2	2,000
2-Acetylaminofluorene	2	53-96-3	2,000
Acrolein	2, 3	107-02-8	15.0
Acrylamide	2, 3	79-06-1	0.137
Acrylic acid	2, 3	79-10-7	17.8
Acrylonitrile	2, 3	107-13-1	2.61
Adipic Acid	3	124-04-9	235
Adiponitrile	3	111-69-3	416
Adriamycin	3	23214-92-8	0.243
Aflatoxins	3	1402-68-2	0.243
Aldrin	3, 6	309-00-2	11.8
Allyl alcohol	3	107-18-6	55.9
Allyl chloride	2, 3	107-05-1	147
Allyl glycidyl ether	3	106-92-3	220
Aluminum alkyls and soluble salts, as Al	3	7429-90-5 *	94.1
Aluminum pyro powders, as Al	3	7429-90-5 *	235
o-Aminoazotoluene (2-Aminoazotoluene)	3	97-56-3	0.162
4-Aminobiphenyl	2, 3	92-67-1	0.0296
Amitrole	3, 6	61-82-5	0.658
Ammonia	3	7664-41-7	819
Ammonium perfluorooctanoate	3	3825-26-1	0.471
Aniline	2, 3	62-53-3	358
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers)	2, 3	29191-52-4 *	4.44
Antimony & compounds, as Sb	2, 3	7440-36-0 *	23.5
Antimony trioxide	3	1309-64-4	3.55
ANTU	3, 6	86-88-4	14.1
Arsenic, elemental and inorganic compounds, as As	2, 3	7440-38-2 *	0.0413
Arsine	2, 3	7784-42-1	0.888
Asbestos, all forms	2, 3	1332-21-4 *	0.243
Atrazine	3, 6	1912-24-9	235
5-Azacitidine	3	320-67-2	0.243
Azathioprine	3	446-86-6	0.348
Azinphos-methyl	3, 6	86-50-0	9.41
Barium, soluble compounds, as Ba	3	7440-39-3 *	23.5
Benomyl	3, 6	17804-35-2	471
Benz(a)anthracene	3	56-55-3	1.62
Benzene	2, 3	71-43-2	22.8
Benzidine	2, 3	92-87-5	0.00265
Benzo(b)fluoranthene	2, 3	205-99-2	0.243
Benzo(j)fluoranthene	3	205-82-3	0.243
Benzo(k)fluoranthene	3	207-08-9	0.243
Benzo(a)pyrene	3	50-32-8	0.162
Benzotrichloride	2, 3	98-07-7	0.243
Benzoyl chloride	3	98-88-4	188
Benzoyl peroxide	3	94-36-0	235
Benzyl acetate	3	140-11-4	2,000

Benzyl chloride	2, 3	100-44-7	244
Beryllium and beryllium compounds, as Be	2, 3	7440-41-7 *	0.0740
Biphenyl	2, 3	92-52-4	59.4
Bischloroethyl nitrosourea	3	154-93-8	0.243
N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlornaphazine)	3	494-03-1	0.243
Bis(chloromethyl) ether (BCME) and technical grade	2, 3	542-88-1	0.243
Bis(2-dimethylaminoethyl) ether (DMAEE)	3	3033-62-3	15.4
Bismuth telluride, as Bi ₂ Te ₃ : Se-Doped	3	1304-82-1	235
Borates, tetra, sodium salts, decahydrate	3	1303-96-4 *	235
Borates, tetra, sodium salts, pentahydrate	3	1303-96-4 *	47.1
Boron tribromide	3	10294-33-4	670
Boron trifluoride	3	7637-07-2	181
Bromacil	3, 6	314-40-9	471
Bromine	3	7726-95-6	30.8
Bromine pentafluoride	3	7789-30-2	33.7
Bromodichloromethane	3	75-27-4	4.80
Bromoform	2, 3	75-25-2	243
1,3-Butadiene	2, 3	106-99-0	0.635
2-Butoxyethanol (Ethylene glycol monobutyl ether; EGBE; butyl cellosolve)	3	111-76-2	2,000
n-butyl alcohol (n-Butanol)	3	71-36-3	2,000
n-Butyl acrylate	3	141-32-2	493
n-Butylamine	3	109-73-9	978
Butylated hydroxyanisole (BHA)	3	25013-16-5	2,000
tert-Butyl chromate, as Cr	2, 3	1189-85-1	0.0148
n-Butyl glycidyl ether (BGE)	3	2426-08-6	2,000
n-Butyl lactate	3	138-22-7	1,407
o-sec-Butylphenol	3	89-72-5	1,446
p-tert-Butyltoluene	3	98-51-1	285
C.I. Basic Red 9 monohydrochloride	3	569-61-9	2.50
Cadmium and cadmium compounds, as Cd	2, 3	7440-43-9 *	0.0987
Calcium cyanamide	2, 3	156-62-7	23.5
Calcium hydroxide	3	1305-62-0	235
Calcium oxide	3	1305-78-8	94.1
Camphor (synthetic)	3	76-22-2	586
Caprolactam (aerosol and vapor)	3	105-60-2	1,089
Captafol	3, 6	2425-06-1	4.71
Captan	2, 3, 6	133-06-2	235
Carbaryl	2, 3, 6	63-25-2	235
Carbofuran	3, 6	1563-66-2	4.71
Carbon monoxide	1	630-08-0	2,000
Carbon black	3	1333-86-4	165
Carbon disulfide	2, 3	75-15-0	1,465
Carbon tetrabromide	3	558-13-4	63.8
Carbon tetrachloride	2, 3, 5	56-23-5	11.8
Carbonyl fluoride	3	353-50-4	254
Carbonyl sulfide	2	463-58-1	2,000
Catechol (Pyrocatechol)	2, 3	120-80-9	1,060
Ceramic Fibers (respirable size)	3	*	0.243
Cesium hydroxide	3	21351-79-1	94.1
Chloramben	2	133-90-4	2,000
Chlorambucil	3	305-03-3	0.00137
Chlordane	2, 3, 6	57-74-9	23.5
Chlorendic acid	3	115-28-6	6.83
Chlorinated camphene (Toxaphene)	2, 3, 6	8001-35-2	0.555
Chlorinated diphenyl oxide	3	55720-99-5	23.5
Chlorinated paraffins (C ₁₂ ; 60% chlorine)	3	108171-26-2 *	7.11
Chlorine	2, 3	7782-50-5	68.2
Chlorine dioxide	3	10049-04-4	13.0
Chlorine trifluoride	3	7790-91-2	24.7
Chloroacetic acid	2	79-11-8	2,000
Chloroacetone	3	78-95-5	248
2-Chloroacetophenone	2, 3	532-27-4	14.9
Chloroacetyl chloride	3	79-04-9	10.9
chlorobenzene (Monochlorobenzene)	2, 3	108-90-7	2,000
Chlorobenzilate	2	510-15-6	2,000
o-Chlorobenzylidene malononitrile	3	2698-41-1	25.2
1-Chloro-1,1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b)	3, 5	75-68-3	2,000

Chlorodifluoromethane (Hydrochlorofluorocarbon-22; HCFC-22; R-22)	3, 5	75-45-6	2,000
1-Chloroethyl-3-(4-methylcyclohexyl)-1-nitrosourea (MeCCNU)	3	13909-09-6	0.243
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	3	13010-47-4	0.243
Chlorofluorocarbon-11 (CFC-11; R-11; Trichlorofluoromethane)	5	75-69-4	2,000
Chlorofluorocarbon-111 (CFC-111)	5	954-56-3	2,000
Chlorofluorocarbon-112 (CFC-112)	5	76-12-0	2,000
Chlorofluorocarbon-113 (CFC-113; R-113; Trichlorotrifluoroethane)	5	76-13-1	2,000
Chlorofluorocarbon-114 (CFC-114; R-114; Dichlorotetrafluoroethane)	5	76-14-2	2,000
Chlorofluorocarbon-115 (CFC-115; R-115; Monochloropentafluoroethane)	5	76-15-3	2,000
Chlorofluorocarbon-12 (CFC-12; R-12; Dichlorodifluoromethane)	5	75-71-8	2,000
Chlorofluorocarbon-13 (CFC-13; R-13; Chlorotrifluoromethane)	5	75-72-9	2,000
Chlorofluorocarbon-211 (CFC-211; R-211)	5	422-78-6	2,000
Chlorofluorocarbon-212 (CFC-212; R-212)	5	3182-26-1	2,000
Chlorofluorocarbon-213 (CFC-213; R-213)	5	165-97-7	2,000
Chlorofluorocarbon-214 (CFC-214; R-214)	5	29255-31-0	2,000
Chlorofluorocarbon-215 (CFC-215; R-215)	5	4259-43-2	2,000
Chlorofluorocarbon-216 (CFC-216; R-216)	5	661-97-2	2,000
Chlorofluorocarbon-217 (CFC-217; R-217)	5	422-86-6	2,000
Chloroform	2, 3	67-66-3	7.73
Chloromethyl methyl ether (CMME)	2, 3	107-30-2	0.243
1-Chloro-1-nitropropane	3, 6	600-25-9	476
p-Chloro-o-toluidene and p-Chloro-o-toluidene hydrochloride	3	95-69-2 *	2.31
4-Chloro-o-phenylene diamine (4-Chloro-1,2-benzenediamine)	3	95-83-0 *	38.6
Chloropicrin (Trichloronitromethane)	3, 6	76-06-2	31.6
beta-Chloroprene	2, 3	126-99-8	0.243
2-Chloropropionic acid	3	598-78-7	20.9
o-Chlorostyrene	3	2039-87-4	2,000
o-Chlorotoluene	3	95-49-8	2,000
Chlorozotocin	3	54749-90-5	0.00258
Chlorpyrifos	3, 6	2921-88-2	9.41
Chromium (metal) and compounds other than Chromium (VI)	2, 3	7440-47-3 *	23.5
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	2, 3	7440-47-3 *	0.0148
Chromium (VI): compounds and particulates	2, 3	7440-47-3 *	0.0148
Chromyl chloride, as Cr	2, 3	14977-61-8	0.0148
Cisplatin	3	15663-27-1	0.243
Coal dust, anthracite (respirable)	3	*	18.8
Coal dust, bituminous (respirable)	3	*	42.3
Cobalt, elemental, and inorganic compounds, as Co	2, 3	7440-48-4 *	0.941
Coke oven emissions	2, 3	*	0.287
Copper and compounds, dusts and mists, as Cu	3	7440-50-8 *	47.1
Copper and compounds, fume, as Cu	3	7440-50-8 *	9.41
p-Cresidine	3	120-71-8	4.13
Cresol (mixtures and isomers)	2, 3	1319-77-3 *	1,041
crotonaldehyde	3	4170-30-3 *	56.3
Crufomate	3, 6	299-86-5	235
Cumene (Isopropyl benzene)	2, 3	98-82-8	2,000
Cyanamide	3	420-04-2	94.1
Cyanides, (inorganics), as CN	2, 3	143-33-9 *	327
Cyanogen	3	460-19-5	1,002
Cyanogen chloride	3	506-77-4	49.3
Cyclohexanol	3	108-93-0	2,000
Cyclohexanone	3	108-94-1	2,000
Cyclohexylamine	3	108-91-8	1,909
Cyclonite	3	121-82-4	23.5
Cyclopentadiene	3	542-92-7	2,000
Cyclophosphamide	3	50-18-0	1.05
Cyclosporin A (Cyclosporine, Ciclosporin)	3	59865-13-3	0.243
Cyhexatin	3, 6	13121-70-5	235
2,4-D, salts and esters	2	94-75-7 *	2,000
Dacarbazine	3	4342-03-4	0.0127
DDE	2	72-55-9	2,000
Demeton	3, 6	8065-48-3	4.97
Diacetone alcohol	3	123-42-2	2,000
2,4-Diaminoanisole sulfate	3	39156-41-7	48.0
2,4-Diaminotoluene (Toluene-2,4-diamine)	2, 3	95-80-7 *	0.162
Diazinon	3, 6	333-41-5	4.71
Diazomethane	2, 3	334-88-3	16.2
Dibenzo(a,h)acridine	2, 3	226-36-8	1.62

Dibenz(a,j)acridine	2, 3	224-42-0	1.62
Dibenz(a,h)anthracene	2, 3	53-70-3	0.148
7H-Dibenzo(c,g)carbazole	2, 3	194-59-2	0.162
Dibenzofurans	2	132-64-9	2,000
Dibenzo(a,e)pyrene	2, 3	192-65-4	0.162
Dibenzo(a,h)pyrene	2, 3	189-64-0	0.0162
Dibenzo(a,i)pyrene	2, 3	189-55-9	0.0162
Dibenzo(a,l)pyrene	2, 3	191-30-0	0.0162
Diborane	3	19287-45-7	5.33
1,2-Dibromo-3-chloropropane (DBCP)	2, 3	96-12-8	0.0935
1,2-Dibromoethane (Ethylene dibromide; EDB)	2, 3	106-93-4	0.808
2-N-Dibutylaminoethanol	3	102-81-8	167
Dibutylphenyl phosphate	3	2528-36-1	165
Diethyl phthalate (Di-n-butyl phthalate)	2, 3	84-74-2	235
Dichloroacetylene	3	7572-29-4	25.4
o-Dichlorobenzene (1,2-Dichlorobenzene)	3	95-50-1	2,000
p-Dichlorobenzene (1,4-Dichlorobenzene)	2, 3	106-46-7	16.2
3,3'-Dichlorobenzidine	2, 3	91-94-1	0.523
1,4-Dichloro-2-butene	3	764-41-0	1.20
1,3-Dichloro-5,5-dimethyl hydantoin	3	118-52-5	9.41
Dichlorodiphenyltrichloroethane (DDT)	3	50-29-3	1.83
1,1-Dichloroethane (Ethyldene dichloride)	2, 3	75-34-3	2,000
1,2-Dichloroethane (Ethylene dichloride; EDC)	2, 3	107-06-2	6.83
Dichloroethyl ether (Bis(2-chloroethyl)ether)	2, 3	111-44-4	1,376
1,2-Dichloroethylene	3	540-59-0	2,000
1,1-Dichloro-1-nitroethane	3	594-72-9	554
1,3-Dichloropropene	2, 3, 6	542-75-6	44.4
2,2-Dichloropropionic acid	3, 6	75-99-0	235
Dichlorvos	2, 3, 6	62-73-7	8.88
Dicrotophos	3, 6	141-66-2	11.8
Dicyclopentadiene	3	77-73-6	1,272
Dieldrin	3, 6	60-57-1	11.8
Diepoxybutane	3	1464-53-5	0.243
Diesel exhaust particulates	3	*	88.8
Diethanolamine	2, 3	111-42-2	94.1
Diethylamine	3	109-89-7	704
2-Diethylaminoethanol	3	100-37-8	451
Diethylene triamine	3	111-40-0	199
Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)	2, 3	117-81-7	235
Diethyl phthalate	3	84-66-2	235
Diethylstilbestrol (DES)	3	56-53-1	0.00178
Diethyl sulfate	2, 3	64-67-5	0.243
1,1-Difluoroethane	3	75-37-6	2,000
Diglycidyl ether (DGE)	3	2238-07-5	25.0
Diglycidyl resorcinol ether	3	101-90-6	0.363
1,8-Dihydroxyanthroquinone (Danthon)	3	117-10-2	8.08
Diisobutyl ketone	3	108-83-8	2,000
Diisopropylamine	3	108-18-9	974
Dimethoxybenzidine and 3,3'-Dimethoxybenzidine hydrochloride (o-Dianisidine and o-Dianisidine hydrochloride)	2, 3	119-90-4 *	0.243
N,N-Dimethyl acetamide	3	127-19-5	1,677
Dimethylamine	3	124-40-3	434
4-Dimethylaminoazobenzene	2, 3	60-11-7	0.137
Dimethylaniline (N,N-Dimethylaniline)	2, 3	121-69-7	1,166
3,3'-Dimethylbenzidine (o-Tolidine)	2, 3	119-93-7	0.243
Dimethyl carbamoyl chloride	2, 3	79-44-7	0.0480
Dimethyllethoxysilane	3	14857-34-2	100
N,N-Dimethylformamide	2, 3	68-12-2	533
1,1-Dimethylhydrazine	2, 3	57-14-7	0.243
Dimethylphthalate	2, 3	131-11-3	235
Dimethyl sulfate	2, 3	77-78-1	0.243
Dimethylvinyl chloride (1-Chloro-2-methylpropene)	3	513-37-1	13.7
Dinitolmide	3	148-01-6	235
Dinitrobenzene (mixtures and isomers)	3	528-29-0 *	48.5
Dinitro-o-cresol (4,6-Dinitro-o-cresol)	2, 3, 6	534-52-1	9.41
2,4-Dinitrophenol	2	51-28-5	2,000
1,6-Dinitropyrene	3	42397-64-8	0.0162

1,8-Dinitropyrene	3	42397-65-9	0.162
Dinitrotoluene (mixtures and isomers)	2, 3	25321-14-6 *	9.41
1,4-Dioxane (1,4-Diethylene oxide)	2, 3	123-91-1	23.1
Dioxathion	3, 6	78-34-2	9.41
Diquat, respirable dust (various compounds) (Diquat dibromide)	3, 6	2764-72-9 *	4.71
Diquat, total dust (various compounds) (Diquat dibromide)	3, 6	2764-72-9 *	23.5
Direct black 38 (Benzidine-based dye)	3	1937-37-7	0.0846
Direct blue 6 (Benzidine-based dye)	3	2602-46-2	0.0846
Disperse Blue 1	3	2475-45-8	137
Disulfiram	3	97-77-8	94.1
Disulfoton	3, 6	298-04-4	4.71
Divinyl benzene (mixtures and isomers)	3	1321-74-0 *	2,000
Endosulfan	3, 6	115-29-7	4.71
Endrin	3, 6	72-20-8	4.71
Enflurane	3	13838-16-9	2,000
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	2, 3	106-89-8	17.8
EPN	3, 6	2104-64-5	4.71
1,2-Epoxybutane (1,2-Butylene oxide)	2, 3	106-88-7	355
Estrogens, conjugated	3	*	0.243
Estrogens, not conjugated: Estrone	3	53-16-7	0.243
Estrogens, not conjugated: Ethinylestradiol	3	57-63-6	0.243
Ethanolamine	3	141-43-5	353
Ethion	3, 6	563-12-2	18.8
2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; cellosolve)	3	110-80-5	867
2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; cellosolve acetate)	3	111-15-9	1,272
Ethyl acrylate	2, 3	140-88-5	963
Ethylamine (Ethanamine)	3	75-04-7	434
Ethyl amyl ketone	3	541-85-5	2,000
Ethyl benzene	2, 3	100-41-4	2,000
Ethyl bromide	3	74-96-4	1,049
Ethyl tert-butyl ether (ETBE)	3	637-92-3	983
Ethyl butyl ketone	3	106-35-4	2,000
Ethyl chloride (Chloroethane)	2, 3	75-00-3	2,000
Ethyl cyanoacrylate	3	7085-85-0	48.2
Ethylene chlorohydrin	3	107-07-3	215
Ethylenediamine	3	107-15-3	1,157
Ethylene glycol vapor and aerosol	2, 3	107-21-1	2,000
Ethylene oxide	2, 3	75-21-8	2.02
Ethylene thiourea	2, 3	96-45-7	13.7
Ethylenimine (Aziridine)	2, 3	151-56-4	41.5
Ethylidene norbornene	3	16219-75-3	1,608
Ethyl methanesulfonate	3	62-50-0	0.243
N-Ethylmorpholine	3	100-74-3	1,108
Ethyl silicate	3	78-10-4	2,000
Fenamiphos	3	22224-92-6	4.71
Fensulfothion	3, 6	115-90-2	4.71
Fenthion	3, 6	55-38-9	9.41
Fine mineral fibers (includes mineral fiber emissions from facilities manufacturing or processing glass, rock or slag fibers, or other mineral derived fibers, of average diameter 1 micrometer or less)	2	*	2,000
Flour Dust (inhaalable fraction)	3	*	23.5
Fluorides, (inorganics), as F	3	*	118
Fluorine	3	7782-41-4	73.1
Fonofos	3, 6	944-22-9	4.71
Formaldehyde	2, 3	50-00-0	13.7
Formamide	3	75-12-7	867
Formic acid	3	64-18-6	443
Furan	3	110-00-9	0.243
Furfural	3	98-01-1	370
Furfuryl alcohol	3	98-00-0	1,888
Germanium tetrahydride	3	7782-65-2	29.5
Glasswool, respirable size	3	*	0.243
Glutaraldehyde	3	111-30-8	13.4
Glycidol	3	556-52-5	0.243
Glycol ethers ⁸	2	*	2,000
Graphite (all forms except graphite fiber)	3	7782-42-5 *	94.1
Halon-1211 (bromochlorodifluoromethane)	5	353-59-3	2,000

Halon-1301 (bromotrifluoromethane)	5	75-63-8	2,000
Halon-2402 (dibromotetrafluoroethane)	5	124-73-2	2,000
Halothane	3	151-67-7	2,000
Heptachlor and heptachlor epoxide	2, 3, 6	76-44-8	2.35
Hexachlorobenzene (HCB)	2, 3	118-74-1	0.0941
Hexachlorobutadiene	2, 3, 6	87-68-3	10.0
Hexachlorocyclopentadiene	2, 3, 6	77-47-4	5.25
Hexachloroethane	2	67-72-1	44.4
Hexachloronaphthalene	3	1335-87-1	9.41
Hexamethyl phosphoramide	2, 3	680-31-9	0.243
Hexamethylene-1,6-diisocyanate (HDI)	2, 3	822-06-0	0.178
n-Hexane	2, 3	110-54-3	2,000
1,6-Hexanediamine	3	124-09-4	112
1-Hexene	3	592-41-6	2,000
sec-Hexyl acetate	3	108-84-9	2,000
Hexylene glycol	3	107-41-5	2,000
Hydrazine and hydrazine sulfate	2, 3	302-01-2	0.0363
Hydrochlorofluorocarbon-121 (HCFC-121)	5	*	2,000
Hydrochlorofluorocarbon-122 (HCFC-122)	5	*	2,000
Hydrochlorofluorocarbon-123 (HCFC-123; R-123)	5	306-83-2 *	2,000
Hydrochlorofluorocarbon-124 (HCFC-124; R-124)	5	63938-10-3 *	2,000
Hydrochlorofluorocarbon-131 (HCFC-131)	5	*	2,000
Hydrochlorofluorocarbon-132b (HCFC-132b)	5	1649-08-7	2,000
Hydrochlorofluorocarbon-133a (HCFC-133a)	5	75-88-7	2,000
Hydrochlorofluorocarbon-141b (HCFC-141b; R-141b)	5	1717-00-6	2,000
Hydrochlorofluorocarbon-21 (HCFC-21; Dichlorofluoromethane)	5	75-43-4	2,000
Hydrochlorofluorocarbon-221 (HCFC-221)	5	*	2,000
Hydrochlorofluorocarbon-222 (HCFC-222)	5	*	2,000
Hydrochlorofluorocarbon-223 (HCFC-223)	5	*	2,000
Hydrochlorofluorocarbon-224 (HCFC-224)	5	*	2,000
Hydrochlorofluorocarbon-225ca (HCFC-225ca)	5	422-56-0	2,000
Hydrochlorofluorocarbon-225cb (HCFC-225cb)	5	507-55-1	2,000
Hydrochlorofluorocarbon-226 (HCFC-226)	5	*	2,000
Hydrochlorofluorocarbon-231 (HCFC-231)	5	*	2,000
Hydrochlorofluorocarbon-232 (HCFC-232)	5	*	2,000
Hydrochlorofluorocarbon-233 (HCFC-233)	5	*	2,000
Hydrochlorofluorocarbon-234 (HCFC-234)	5	*	2,000
Hydrochlorofluorocarbon-235 (HCFC-235)	5	*	2,000
Hydrochlorofluorocarbon-241 (HCFC-241)	5	*	2,000
Hydrochlorofluorocarbon-242 (HCFC-242)	5	*	2,000
Hydrochlorofluorocarbon-243 (HCFC-243)	5	*	2,000
Hydrochlorofluorocarbon-244 (HCFC-244)	5	*	2,000
Hydrochlorofluorocarbon-251 (HCFC-251)	5	*	2,000
Hydrochlorofluorocarbon-252 (HCFC-252)	5	*	2,000
Hydrochlorofluorocarbon-253 (HCFC-253)	5	*	2,000
Hydrochlorofluorocarbon-261 (HCFC-261)	5	*	2,000
Hydrochlorofluorocarbon-262 (HCFC-262)	5	*	2,000
Hydrochlorofluorocarbon-271 (HCFC-271)	5	*	2,000
Hydrochlorofluorocarbon-31 (HCFC-31; R-31; Chlorofluoromethane)	5	593-70-4	2,000
Hydrogenated terphenyls	3	61788-32-7	232
Hydrogen bromide	3	10035-10-6	649
Hydrogen chloride (Hydrochloric acid; Muriatic acid)	2, 3, 4	7647-01-0	355
Hydrogen cyanide	2, 3	74-90-8	340
Hydrogen fluoride (Hydrofluoric acid)	2, 3	7664-39-3	161
Hydrogen peroxide	3	7722-84-1	65.5
Hydrogen sulfide	3	7783-06-4	656
Hydroquinone	2, 3	123-31-9	94.1
2-Hydroxypropyl acrylate	3	999-61-1	125
Indeno(1,2,3-cd)pyrene	2, 3	193-39-5	1.62
Iodium	3	7440-74-6	4.71
Iodine	3	7553-56-2	67.9
Iron dextran complex	3	9004-66-4	0.243
Iron oxide dust and fume, as Fe	3	1309-37-1 *	235
Iron salts, soluble, as Fe	3	*	47.1
Isobutyl alcohol	3	78-83-1	2,000
Isooctyl alcohol	3	26952-21-6	2,000
Isophorone	2, 3	78-59-1	1,849
Isophorone diisocyanate	3	4098-71-9	2.14

Isoprene	3	78-79-5	0.243
2-Isopropoxyethanol	3	109-59-1	2,000
Isopropylamine	3	75-31-0	569
Isopropyl glycidyl ether	3	4016-14-2	2,000
N-Isopropylaniline	3	768-52-5	520
Kaolin	3	1332-58-7	94.1
Kepone (Chlordecone)	3	143-50-0	0.0386
Ketene	3	463-51-4	40.5
Lead Acetate, as Pb	3	301-04-2	2.22
Lead compounds	2	7439-92-1 *	2,000
Lead Phosphate, as Pb	3	7446-27-7	14.8
Lindane and other hexachlorocyclohexane isomers	2, 3	58-89-9 *	0.573
Maleic anhydride	2, 3	108-31-6	18.9
Manganese, elemental and inorganic compounds, as Mn	2, 3	7439-96-5 *	9.41
Melphalan	3	148-82-3	0.00480
Mercury, as Hg, alkyl compounds	2, 3	7439-97-6 *	0.471
Mercury, as Hg, aryl compounds	2, 3	7439-97-6 *	4.71
Mercury, as Hg, inorganic forms including metallic mercury	2, 3	7439-97-6 *	1.18
Mesityl oxide	3	141-79-7	2,000
Mestranol	3	72-33-3	0.243
Methacrylic acid	3	79-41-4	2,000
Methanol	2	67-56-1	2,000
Methomyl	3, 6	16752-77-5	118
Methoxsalen (8-Methoxypсорален)	3	298-81-7	0.243
Methoxychlor	2	72-43-5	2,000
2-Methoxyethanol (MethylCellosolve; EGME)	3	109-86-4	732
2-Methoxyethyl acetate (MethylCellosolve acetate; EGMEA)	3	110-49-6	1,137
4-Methoxyphenol	3	150-76-5	235
Methyl chloroform (1,1,1-Trichloroethane; TCA)	2	71-55-6	2,000
Methyl ethyl ketone (2-Butanone; MEK)	2	78-93-3	2,000
Methyl acrylate	3	96-33-3	331
Methylacrylonitrile	3	126-98-7	129
Methylamine	3	74-89-5	299
Methyl n-amyl ketone	3	110-43-0	2,000
N-Methyl aniline	3	100-61-8	103
Methyl bromide (Bromomethane)	2, 3, 6	74-83-9	88.8
Methyl n-butyl ketone	3	591-78-6	964
Methyl chloride (Chloromethane)	2, 3	74-87-3	2,000
5-Methyl chrysene	3	3697-24-3	0.162
Methyl 2-cyanoacrylate	3	137-05-3	42.8
Methylcyclohexanol	3	25639-42-3	2,000
o-Methylcyclohexanone	3	583-60-8	2,000
Methyl demeton	3, 6	8022-00-2	23.5
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	2, 3	101-68-8	2.41
Methylene chloride (Dichloromethane)	2, 3	75-09-2	378
4,4'-Methylene bis(2-chloroaniline) (MOCA)	2, 3	101-14-4	0.413
Methylene bis(4-cyclohexylisocyanate)	3	5124-30-1	2.52
4,4'-Methylenedianiline (and dihydrochloride)	2, 3	101-77-9 *	0.386
Methyl ethyl ketone peroxide	3	1338-23-4	94.3
Methyl formate	3	107-31-3	2,000
Methyl hydrazine	2, 3	60-34-4	0.887
Methyl iodide (Iodomethane)	2, 3	74-88-4	546
Methyl isoamyl ketone	3	110-12-3	2,000
Methyl isobutyl carbinol	3	108-11-2	2,000
Methyl isobutyl ketone (MIBK; Hexone)	2, 3	108-10-1	2,000
Methyl isocyanate	2, 3	624-83-9	2.20
Methyl methacrylate	2, 3	80-62-6	2,000
Methyl methanesulfonate	3	66-27-3	6.35
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	3	70-25-7	0.0740
Methyl parathion	3, 6	298-00-0	9.41
alpha-Methyl styrene	3	98-83-9	2,000
Methyl tert-butyl ether (MTBE)	2, 3	1634-04-4	2,000
Methyl vinyl ketone	3	78-94-4	37.5
Metribuzin	3	21087-64-9	235
Metronidazole	3	443-48-1	0.243
Mevinphos (Phosdrin)	3, 6	7786-34-7	4.23
Mirex	3	2385-85-5	0.0348
Molybdenum, as Mo, metal and insoluble compounds	3	7439-98-7 *	471

Molybdenum, as Mo, soluble compounds	3	7439-98-7 *	235
Monocrotophos	3, 6	6923-22-4	11.8
Morpholine	3	110-91-8	2,000
Mustard gas	3	505-60-2	0.243
Myleran (1,4-Butanediol dimethanesulphonate; Busulphan)	3	55-98-1	0.243
Naled	3, 6	300-76-5	141
Naphthalene	2, 3	91-20-3	2,000
2-Naphthylamine	3	91-59-8	0.243
Nickel and compounds, as Ni	2, 3	7440-02-0 *	0.683
Nickel carbonyl, as Ni	3	13463-39-3	0.683
Nickel subsulfide, as Ni	2, 3	12035-72-2	0.370
Nitric acid	3	7697-37-2	243
Nitrilotriacetic acid	3	139-13-9	118
p-Nitroaniline	3	100-01-6	141
o-Nitroanisole	3	91-23-6	0.243
Nitrobenzene	2, 3	98-95-3	237
4-Nitrobiphenyl	2	92-93-3	2,000
p-Nitrochlorobenzene	3	100-00-5	30.3
6-Nitrochrysene	3	7496-02-8	0.0162
Nitroethane	3	79-24-3	2,000
Nitrofen	3	1836-75-5	7.73
Nitrogen mustards (2,2'-Dichloro-N-methyldiethylamine)	3	51-75-2	0.243
Nitrogen oxides	1, 4	*	2,000
Nitromethane	3	75-52-5	2,000
4-Nitrophenol	2	100-02-7	2,000
1-Nitropropane	3	108-03-2	2,000
2-Nitropropane	2, 3	79-46-9	0.243
1-Nitropyrene	3	5522-43-0	1.62
4-Nitropyrene	3	57835-92-4	1.62
N-Nitrosodi-n-butylamine	3	924-16-3	0.111
N-Nitrosodiethanolamine	3	1116-54-7	0.222
N-Nitrosodiethylamine	3	55-18-5	0.00413
N-Nitrosodimethylamine	2, 3	62-75-9	0.0127
N-Nitrosodi-n-propylamine	3	621-64-7	0.0888
N-Nitroso-N-ethylurea	3	759-73-9	0.0231
4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	3	64091-91-4	0.243
N-Nitroso-N-methylurea	2, 3	684-93-5	0.00523
N-Nitrosomethylvinylamine	3	4549-40-0	0.243
N-Nitrosomorpholine	2, 3	59-89-2	0.0935
N-Nitrosornicotine	3	16543-55-8	0.243
N-Nitrosopiperidine	3	100-75-4	0.0658
N-Nitrosopyrrolidine	3	930-55-2	0.291
N-Nitrososarcosine	3	13256-22-9	0.243
Nitrotoluene (mixtures and isomers)	3	88-72-2 *	528
Nitrous oxide	3	10024-97-2	2,000
Ochratoxin A	3	303-47-9	0.243
Octachloronaphthalene	3	2234-13-1	4.71
Oestradiol (Estradiol)	3	50-28-2	0.0162
Oxalic acid	3	144-62-7	47.1
P,p'-Oxybis(benzenesulfonyl hydrazide)	3	80-51-3	4.71
4,4'-Oxydianiline (2,4-Diaminophenyl ether)	3	101-80-4	0.243
Paraquat (respirable sizes) (Paraquat chloride)	3, 6	1910-42-5 *	4.71
Parathion	2, 3, 6	56-38-2	4.71
Particulate matter	4	*	2,000
Pentachloronaphthalene	3	1321-64-8	23.5
Pentachloronitrobenzene (Quintobenzene; PCNB)	2, 3	82-68-8	23.5
Pentachlorophenol (PCP)	2, 3	87-86-5	23.5
Pentyl Acetate (mixtures and isomers)	3	628-63-7	2,000
Perchloroethylene (Tetrachloroethylene)	2, 3	127-18-4	30.1
Perchloromethyl mercaptan	3	594-42-3	35.8
Perfluoroisobutylene	3	382-21-8	5.35
Persulfates (Ammonium, Potassium, Sodium)	3	7727-54-0 *	4.71
Phenacetin	3	62-44-2	282
Phenazopyridine and phenazopyridine hydrochloride	3	136-40-3 *	3.63
Phenol	2, 3	108-95-2	906
Phenolphthalein	3	77-09-8	0.243
Phenothiazine	3, 6	92-84-2	235
Phenoxybenzamine hydrochloride	3	63-92-3	0.231

Phenylenediamine (mixtures and isomers)	2, 3	106-50-3 *	4.71
Phenyl ether vapor	3	101-84-8	328
Phenyl glycidyl ether (PGE)	3	122-60-1	28.9
Phenylhydrazine	3	100-63-0	20.8
Phenyl mercaptan	3	108-98-5	106
Phentyoin and sodium salt of phenytoin	3	57-41-0 *	0.243
Phorate	3, 6	298-02-2	2.35
Phosgene	2, 3	75-44-5	19.0
Phosphine	2, 3	7803-51-2	19.6
Phosphoric acid	3	7664-38-2	47.1
Phosphorus (yellow)	2, 3	7723-14-0	4.77
Phosphorus oxychloride	3	10025-87-3	29.5
Phosphorus pentachloride	3	10026-13-8	40.1
Phosphorus pentasulfide	3	1314-80-3	47.1
Phosphorus trichloride	3	7719-12-2	52.9
Phthalic anhydride	2, 3	85-44-9	285
Picric acid	3	88-89-1	4.71
Pindone	3, 6	83-26-1	4.71
Platinum (metal)	3	7440-06-4	47.1
Platinum, soluble salts, as Pt	3	7440-06-4 *	0.0941
PM10	1, 4	*	2,000
Polybrominated biphenyls (PBBs; Bromodiphenyls)	3	59536-65-1 *	0.0207
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	2, 3	1336-36-3	0.0100
Potassium hydroxide	3	1310-58-3	131
Procarbazine and procarbazine hydrochloride	3	366-70-1 *	0.0444
1,3-Propane sultone	2, 3	1120-71-4	0.258
Propargyl alcohol	3	107-19-7	108
beta-Propiolactone	2, 3	57-57-8	0.0444
Propionaldehyde	2	123-38-6	2,000
Propionic acid	3	79-09-4	1,426
Propoxur (Baygon)	2, 3, 6	114-26-1	23.5
Propylene dichloride (1,2-Dichloropropane)	2, 3	78-87-5	71.1
Propylene glycol monomethyl ether (PGME)	3	107-98-2	2,000
Propylene imine (2-Methyl aziridine)	2, 3	75-55-8	0.243
Propylene oxide	2, 3	75-56-9	48.0
Propylthiouracil	3	51-52-5	0.613
Pyrethrum	3, 6	8003-34-7	235
Pyridine	3	110-86-1	675
Quinoline	2	91-22-5	2,000
Quinone	2, 3, 6	106-51-4	20.8
Resorcinol	3	108-46-3	2,000
Rhodium (metal) and insoluble compounds, as Rh	3	7440-16-6 *	47.1
Rhodium, soluble compounds, as Rh	3	7440-16-6 *	0.471
Rotenone (commercial)	3, 6	83-79-4	235
Safrole	3	94-59-7	2.82
Selenium and compounds, as Se	2, 3	7782-49-2 *	9.41
Silicon tetrahydride (Silane)	3	7803-62-5	309
Sodium Azide, as sodium azide or hydrazoic acid vapor	3	26628-22-8 *	19.1
Sodium bisulfite	3	7631-90-5	235
Sodium fluoroacetate	3, 6	62-74-8	2.35
Sodium hydroxide	3	1310-73-2	131
Sodium metabisulfite	3	7681-57-4	235
Stibine (Antimony hydride)	3, 6	7803-52-3	24.0
Stoddard solvent (Mineral spirits)	3	8052-41-3	2,000
Streptozotocin	3	18883-66-4	0.00573
Strong inorganic acid mists containing sulfuric acid (>35% by weight)	3	7664-93-9	0.243
Strychnine	3, 6	57-24-9	7.06
Styrene oxide	2	96-09-3	2,000
Styrene, monomer	2, 3	100-42-5	2,000
Sulfallate	3	95-06-7	3.29
Sulfometuron methyl	3	74222-97-2	235
Sulfotep (TEDP)	3, 6	3689-24-5	9.41
Sulfur dioxide	1, 4	7446-09-5	2,000
Sulfur monochloride	3	10025-67-9	361
Sulfur tetrafluoride	3	7783-60-0	28.9
Sulfuric acid	3	7664-93-9	47.1
Sulfuryl fluoride	3, 6	2699-79-8	982
Sulprofos	3	35400-43-2	47.1

Talc, containing no asbestos fibers	3	14807-96-6	94.1
Tamoxifen	3	10540-29-1	0.243
Tantalum, metal and oxide dusts, as Ta	3	7440-25-7 *	235
Tellurium and compounds, as Te, except hydrogen telluride	3	13494-80-9 *	4.71
TEPP	3, 6	107-49-3	2.35
Terphenyls	3	26140-60-3	327
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	2,3,4	1746-01-6	0.00001
1,1,2,2-Tetrachloroethane	2, 3	79-34-5	323
Tetrachloronaphthalene	3	1335-88-2	94.1
1,1,1,2-Tetrafluoroethane	3	811-97-2	2,000
Tetrafluoroethylene	3	116-14-3	0.243
Tetrahydrofuran	3	109-99-9	2,000
Tetranitromethane	3	509-14-8	0.243
Thallium, elemental and soluble compounds, as Tl	3	7440-28-0 *	4.71
Thioacetamide	3	62-55-5	0.105
Thionyl chloride	3	7719-09-7	318
Thiourea	3	62-56-6	8.46
Thiram	3, 6	137-26-8	47.1
Tin organic compounds, as Sn	3	7440-31-5 *	4.71
Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn	3	7440-31-5 *	94.1
Titanium tetrachloride	2	7550-45-0	2,000
Toluene (Toluol)	2, 3	108-88-3	2,000
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI), m- and p-Toluidine	2, 3	584-84-9 *	1.24
o-Toluidine and o-toluidine hydrochloride and mixed isomers	3	108-44-1	412
Total reduced sulfur and reduced sulfur compounds	2, 3	95-53-4 *	3.48
Tributyl phosphate	4	*	2,000
Trichloroacetic acid	3	126-73-8	103
1,2,4-Trichlorobenzene	3	76-03-9	314
1,1,2-Trichloroethane	2, 3	120-82-1	2,000
Trichloroethylene (Trichloroethene)	2, 3	79-00-5	2,000
Trichloronaphthalene	2, 3	79-01-6	88.8
2,4,5-Trichlorophenol	3	1321-65-9	235
2,4,6-Trichlorophenol	2	95-95-4	2,000
1,2,3-Trichloropropane	2, 3	88-06-2	57.3
Triethanolamine	3	96-18-4	0.243
Triethylamine	3	102-71-6	235
Trifluralin	2	121-44-8	195
1,3,5-Triglycidyl-s-triazinetrione	2	1582-09-8	2,000
Trimellitic anhydride	3	2451-62-9	2.35
Trimethyl benzene (mixtures and isomers)	3	552-30-7	2.62
Trimethylamine	3	25551-13-7	2,000
2,2,4-Trimethylpentane	3	75-50-3	569
2,4,6-Trinitrotoluene (TNT)	2	540-84-1	2,000
Triorthocresyl phosphate	3	118-96-7	4.71
Triphenyl phosphate	3	78-30-8	4.71
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	3	115-86-6	141
Tris(2,3-dibromopropyl phosphate)	3	52-24-4	0.0523
Tungsten, as W, metal and insoluble compounds	3	126-72-7	0.269
Tungsten, as W, soluble compounds	3	7440-33-7 *	235
Uranium (natural), soluble, and insoluble compounds, as U	3	7440-33-7 *	47.1
Urethane (Ethyl carbamate)	3	7440-61-1 *	9.41
Urethane (Ethyl carbamate)	2, 3	51-79-6	0.613
n-Valeraldehyde	3	110-62-3	2,000
Vanadium pentoxide, as V ₂ O ₅ , respirable dust and fume	3	1314-62-1	2.35
Vinyl acetate	2, 3	108-05-4	1,657
Vinyl bromide	2	593-60-2	103
Vinyl chloride	2, 3	75-01-4	20.2
Vinyl cyclohexene dioxide (4-vinyl-1-cyclohexene diepoxyde)	3	106-87-6	0.243
4-Vinyl cyclohexene	3	100-40-3	20.8
Vinyl fluoride	3	75-02-5	88.6
Vinyldene chloride (1,1-Dichloroethylene)	2, 3	75-35-4	933
Vinyl toluene	3	25013-15-4	2,000
Volatile organic compounds (Reactive organic gases)	1	*	2,000
Warfarin	3, 6	81-81-2	4.71
Xylene (mixtures and isomers) (Xylool; Dimethyl Benzene)	2, 3	1330-20-7 *	2,000
m-Xylene-a,a'-diamine	3	1477-55-0	6.54
Xyldine (mixtures and isomers)	3	1300-73-8 *	117

Yttrium metal and compounds, as Y	3	7440-65-5 *	47.1
Zeolites (Eriomite)	3	66733-21-9	0.243
Zirconium and compounds, as Zr	3	7440-67-7 *	235

¹ Criteria pollutant or criteria pollutant precursor

² Federal hazardous air pollutant listed under section 112(b) of the act

³ State hazardous air pollutant

⁴ Federal New Source Performance Standard

⁵ Stratospheric ozone depleting substance

⁶ Pesticides, rodenticides, insecticides, herbicides and fungicides

⁷ The Chemical Abstract Service or CAS numbers refer to the unique chemical abstracts service registry number assigned to a specific chemical, isomer or mixture of chemicals or isomers and recorded in the CAS chemical registry system by the Chemical Abstracts Service, PO Box 3012, Columbus OH 43210, phone 1-614-447-3600.

⁸ Glycol ethers means any compound which can be described by the following chemical formula: R(OCH₂CH₂)_n-OR'

where: n = 1, 2 or 3

R = alkyl C7 or less

or R = phenyl or alkyl substituted phenyl

R' = H, alkyl C7 or less or

OR' = ester, sulfate, phosphate, nitrate or sulfonate

(i.e. any group that will readily come off)

*Indicates contaminants for which multiple CAS numbers may apply. For contaminants listed as a metal and its compounds, the given CAS number refers to the metal.

SECTION 20. NR 407.09(1)(c)1.b. is amended to read:

NR 407.09(1)(c)1.b. Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring, periodic monitoring or testing sufficient to yield reliable data from the relevant time period that are representative of the stationary source's compliance with the permit. Monitoring or testing requirements shall assure use of terms, test methods, units, averaging periods and other statistical conventions consistent with the applicable requirement. Monitoring may consist of recordkeeping sufficient to meet the requirements of this subd. 1. b. Permits for non-part 70 sources shall contain the requirements in this subd. 1. b. only for those air contaminants emitted from an emissions unit, operation or activity where the actual emissions exceed the levels in Table 2, or Table 3 for calendar years 2004 and later, in s. NR 407.05. Actual emissions used for this determination shall be those reported under ch. NR 438 for the most recent year prior to when the permit or renewal is issued.

SECTION 21. NR 407.14(1) (intro.) is amended to read:

NR 407.14(1)(intro.) MANDATORY REVISIONS. The department, except as provided for in par. (e), shall revise an operation permit for any of the following reasons:

SECTION 22. NR 407.14(1)(e) is created to read:

NR 407.14(1)(e) The change in the applicable requirement is due to an addition of, or revision to, a hazardous air contaminant ambient air standard or control requirement in subch. III of ch. NR 445.

SECTION 23. NR 407.14(1m)(intro.) is amended to read:

NR 407.14(1m) DISCRETIONARY REVISIONS. The department may revise an operation permit for any of the reasons listed in sub. (1)(a) to (d), regardless of the years remaining in the permit term, or for any of the following reasons:

SECTION 24. NR 407.14(1m)(e) is created to read:

NR 407.14(1m)(e) The change in the applicable requirement is due to an addition of, or revision to, a hazardous air contaminant ambient air standard or control requirement in subch. III of ch. NR 445.

SECTION 25. NR 410.03(2)(g) is amended to read:

NR 410.03(2)(g) \$650, if the source is subject to an emission limitation under chs. NR 446 to 483 469, or if the permit establishes an emission limit for a hazardous air contaminant listed in Table 1, 2, 4 A, B or 5 of ch. NR 445 C of s. NR 445.07.

SECTION 26. NR 410.04(2)(b)5. and 6. are created to read:

NR 410.04(2)(b)5. Emissions of acetone, sec-butanol, tert-butanol, n-butyl acetate, chlorobromomethane, diethyl ketone, ethyl acetate, isobutyl acetate, methyl acetate, methyl acetylene, octane (all isomers), pentane (all isomers) and vinylidine flouride.

6. Emissions of di-n-octyl phthalate, octachlorostyrene, pentachlorobenzene, perylene, 1,2,3,4-tetrachlorobenzene, 1,2,4,5-tetrachlorobenzene and tributyl tin.

SECTION 27. NR 419.07(4)(b)3., (6)(a)1.b. and (7)(b) are amended to read:

NR 419.07(4)(b)3. The maximum emission limit for any hazardous air contaminant listed in tables 1 to 5 of s. NR 445.04 under ch. NR 445 Tables A to C of s. NR 445.07.

(6)(a)1.b. When a substance listed in Table 3 with a control requirement in Table A, B or C of s. NR 445.04 s. NR 445.07 is present in the contaminated soil, testing for the Table 3 the listed substances substance shall be done once during the first 3 days of operation, once during the third week of operation, and once every 6 months thereafter. For soil contaminated with more than one Table 3 air contaminant with a control requirement in Table A, B or C, the department's bureau of air management may approve the testing of certain Table 3 substances that act as indicators for other Table 3 substances with control requirements in Table A, B or C present in the soil.

(7)(b) Maintain records for 3 years quantifying the year-to-date weight of s. NR 445.04 Table 3 substances with control requirements in Table A, B or C of s. NR 445.07 contained in soil or water remediated for which testing was required under sub. (6).

SECTION 28. NR 422.03(1)(a), Note, (b), Note and (4)(a) are amended to read:

NR 422.083(1)(a) Except as provided in sub. (4), this section applies to plastic parts coating at facilities which are located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05, of 25 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 25 tons per year, then the only requirements of this section which apply to the facility are the recordkeeping requirements of sub. (4).

(b) Except as provided in sub. (4), this section applies to plastic parts coating at facilities which are located in Kewaunee, Manitowoc or Sheboygan county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05, of 100 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or

421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 100 tons per year, then the only requirements of this section which apply to the facility are the recordkeeping requirements of sub. (4).

(4)(a) To determine applicability under sub. (1)(a) or (b), each owner or operator of a plastic parts coating operation at a facility located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county shall maintain records of the maximum theoretical emissions of VOCs from the facility excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05.

SECTION 29. NR 423.035(1)(a), Note, (b) and Note are amended to read:

NR 423.035(1)(a) Except as provided in sub. (9)(a), this section applies to industrial cleaning operations at facilities which are located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.04, 423.05, 424.04 or 424.05, of 25 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.04, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 25 tons per year, then the only requirements of this section which apply to the facility are the recordkeeping requirements of sub. (9)(a).

(b) Except as provided in sub. (9)(a), this section applies to industrial cleaning operations at facilities which are located in Kewaunee, Manitowoc or Sheboygan county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.04, 423.05, 424.04 or 424.05, of 100 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.04, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4.

If the quantity calculated in step 3 is less than 100 tons per year, then the only requirements of this section which apply to the facility are the recordkeeping requirements of sub. (9)(a).

SECTION 30. NR 423.04 is repealed.

SECTION 31. NR 438.03(1)(a) is amended to read:

NR 438.03(1)(a) ~~Any Except as provided in par. (am), any person owning or operating a facility which emits an air contaminant in quantities above the applicable reporting levels listed in Table 1, except indirect sources of air pollution, shall annually submit to the department an emission inventory report of annual, actual emissions or, for particulate matter, PM₁₀, sulfur dioxide, nitrogen oxides, carbon monoxide and volatile organic compounds, throughput information sufficient for the department to calculate its annual, actual emissions. The reportable air contaminants and applicable reporting levels are listed in the following tables:~~

1. Table 1 for air contaminants emitted in calendar years 2003 and earlier.
2. Table 2 for air contaminants emitted in calendar years 2004 and later.

SECTION 32. NR 438.03(1)(am) is created to read:

NR 438.03(1)(am)1. Beginning with emissions reported for calendar year 2004, the owner or operator of a facility of incidental emissions, as defined by the provisions of s. NR 445.10(1), may limit the information on hazardous air contaminants included in his or her annual emission inventory report to those contaminants identified under s. NR 445.10(1)(a) or (b).

2. Notwithstanding subd. 1, the owner or operator shall continue to report annual emissions of any air contaminant reported in prior calendar years for the facility, provided annual, actual emissions are greater than the reporting level in Table 2.

SECTION 33. NR 438.03(1)(b) is amended to read:

NR 438.03(1)(b) When preparing its ~~an~~ emission inventory report, the owner or operator of a facility may rely on information in an approved material safety data sheet. Trace contaminants need not be reported if they constitute less than 1% ~~(10,000 parts per million)~~ of the material, or 0.1% ~~(1,000 parts per million)~~ of the material if

the air contaminant is listed with a control requirement in Table 3- Table A, B or C of s. NR 445.04 s. NR 445.07, unless a hazardous air contaminant is formed in processing the material.

SECTION 34. Table 1 (title) of NR 438.03(1) is amended to read:

Table 1
Reporting Levels for Calendar Years 2003 and Earlier

SECTION 35. Table 2 of NR 438.03(1) is created to read:

Table 2
Reporting Levels for Calendar Years 2004 and Later

Air Contaminant Name	CAS Number ¹	Reporting Level (lbs/yr)
Acetaldehyde	75-07-0	404
Acetamide	60-35-5	6,000
Acetic acid	64-19-7	5,774
Acetic anhydride	108-24-7	4,912
Acetone	67-64-1	100,000
Acetone Cyanohydrin, as CN	75-86-5	5,350
Acetonitrile	75-05-8	6,000
Acetophenone	98-86-2	6,000
2-Acetylaminofluorene	53-96-3	6,000
Acrolein	107-02-8	75.0
Acrylamide	79-06-1	0.683
Acrylic acid	79-10-7	88.8
Acrylonitrile	107-13-1	13.1
Adipic Acid	124-04-9	1,176
Adiponitrile	111-69-3	2,080
Adriamycin	23214-92-8	1.22
Aflatoxins	1402-68-2	1.22
Aldrin	309-00-2	58.8
Allyl alcohol	107-18-6	279
Allyl chloride	107-05-1	736
Allyl glycidyl ether	106-92-3	1,098
Aluminum alkyls and soluble salts, as Al	7429-90-5 ²	471
Aluminum pyro powders, as Al	7429-90-5 ²	1,176
o-Aminoazotoluene (2-Aminoazotoluene)	97-56-3	0.808
4-Aminobiphenyl	92-67-1	0.148
Amitrole	61-82-5	3.29
³ Ammonia	7664-41-7	4,097
Ammonium perfluorooctanoate	3825-26-1	2.35
Aniline	62-53-3	1,792
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers)	29191-52-4 ²	22.2
Antimony and compounds, as Sb	7440-36-0 ²	118
Antimony trioxide	1309-64-4	17.8
ANTU	86-88-4	70.6
Arsenic, elemental and inorganic compounds, as As	7440-38-2 ²	0.207
³ Arsine	7784-42-1	4.44
Asbestos, all forms	1332-21-4 ²	1.22
Atrazine	1912-24-9	1,176
5- Azacitidine	320-67-2	1.22
Azathioprine	446-86-6	1.74
Azinphos-methyl	86-50-0	47.1
Barium soluble compounds, as Ba	7440-39-3 ²	118

Benomyl	17804-35-2	2,353
Benz(a)anthracene	56-55-3	8.08
Benzene	71-43-2	114
Benzidine	92-87-5	0.0133
Benzo(a)phenanthrene (Chrysene)	218-01-9	12.0
Benzo(j,k)fluorene	206-44-0	12.0
Benzo(b)fluoranthene	205-99-2	1.22
Benzo(j)fluoranthene	205-82-3	1.22
Benzo(k)fluoranthene	207-08-9	1.22
Benzo(a)pyrene	50-32-8	0.808
Benzotrichloride	98-07-7	1.22
Benzoyl chloride	98-88-4	940
Benzoyl peroxide	94-36-0	1,176
Benzyl acetate	140-11-4	6,000
Benzyl chloride	100-44-7	1,218
Beryllium and beryllium compounds, as Be	7440-41-7 ²	0.370
Biphenyl	92-52-4	297
Bischloroethyl nitrosourea	154-93-8	1.22
N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlornaphazine)	494-03-1	1.22
Bis(chloromethyl) ether(BCME) and technical grade	542-88-1	1.22
Bis(2-dimethylaminoethyl) ether (DMAEE)	3033-62-3	77.1
Bismuth telluride, as Bi ₂ Te ₃ : Se-Doped	1304-82-1	1,176
Borates, tetra, sodium salts, decahydrate	1303-96-4 ²	1,176
Borates, tetra, sodium salts, pentahydrate	1303-96-4 ²	235
Boron tribromide	10294-33-4	3,352
³ Boron trifluoride	7637-07-2	907
Bromacil	314-40-9	2,353
³ Bromine	7726-95-6	154
³ Bromine pentafluoride	7789-30-2	168
Bromodichloromethane	75-27-4	24.0
Bromoform	75-25-2	1,216
1,3-Butadiene	106-99-0	3.17
sec-Butanol	78-92-2	100,000
tert-Butanol	75-65-0	100,000
⁴ 2-Butoxyethanol (Ethylene glycol monobutyl ether; EGBE; butyl cellosolve)	111-76-2	6,000
n-Butyl alcohol (n-Butanol)	71-36-3	6,000
n-Butyl acetate	123-86-4	100,000
n-Butyl acrylate	141-32-2	2,467
n-Butylamine	109-73-9	4,892
Butylated hydroxyanisole (BHA)	25013-16-5	6,000
tert-Butyl chromate, as Cr	1189-85-1	0.0740
n-Butyl glycidyl ether (BGE)	2426-08-6	6,000
n-Butyl lactate	138-22-7	6,000
o-sec-Butylphenol	89-72-5	6,000
p-tert-Butyltoluene	98-51-1	1,426
C.I. Basic Red 9 monohydrochloride	569-61-9	11.4
Cadmium and cadmium compounds, as Cd	7440-43-9 ²	0.494
Calcium cyanamide	156-62-7	118
Calcium hydroxide	1305-62-0	1,176
Calcium oxide	1305-78-8	471
Camphor (synthetic)	76-22-2	2,930
Caprolactam (aerosol and vapor)	105-60-2	5,444
Captafol	2425-06-1	23.5
Captan	133-06-2	1,176
Carbaryl	63-25-2	1,176
Carbofuran	1563-66-2	23.5
Carbon dioxide	124-38-9	100,000 tons
Carbon monoxide	630-08-0	10,000
Carbon black	1333-86-4	823
Carbon disulfide	75-15-0	6,000
Carbon tetrabromide	558-13-4	319
Carbon tetrachloride	56-23-5	59.2
Carbonyl fluoride	353-50-4	1,270
Carbonyl sulfide	463-58-1	6,000
Catechol (Pyrocatechol)	120-80-9	5,298
Ceramic Fibers (respirable size)	21351-79-1	1.22
Cesium hydroxide	133-90-4	471
Chloramben		6,000

Chlorambucil	305-03-3	0.00683
Chlordane	57-74-9	118
Chlorendic acid	115-28-6	34.2
Chlorinated camphene (Toxaphene)	8001-35-2	2.78
Chlorinated diphenyl oxide	55720-99-5	118
Chlorinated paraffins (C12; 60% chlorine)	108171-26-2	35.5
³ Chlorine	7782-50-5	341
³ Chlorine dioxide	10049-04-4	64.9
³ Chlorine trifluoride	7790-91-2	124
Chloroacetic acid	79-11-8	6,000
Chloroacetone	78-95-5	1,238
2-Chloroacetylphenone	532-27-4	74.4
Chloroacetyl chloride	79-04-9	54.3
Chlorobenzene (Monochlorobenzene)	108-90-7	6,000
Chlorobenzilate	510-15-6	6,000
o-Chlorobenzylidene malononitrile	2698-41-1	126
Chlorobromomethane	74-97-5	100,000
³ 1-Chloro-1,1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b)	75-68-3	6,000
³ Chlorodifluoromethane (Hydrochlorofluorocarbon-22; HCFC-22; R-22)	75-45-6	6,000
1-Chloroethyl-3-(4-methylcyclohexyl)-1-nitrosourea (MeCCNU)	13909-09-6	1.22
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	13010-47-4	1.22
³ Chlorofluorocarbon-11 (CFC-11; R-11; Trichlorofluoromethane)	75-69-4	6,000
³ Chlorofluorocarbon-111 (CFC-111)	954-56-3	6,000
³ Chlorofluorocarbon-112 (CFC-112)	76-12-0	6,000
³ Chlorofluorocarbon-113 (CFC-113; R-113; Trichlorotrifluoroethane)	76-13-1	6,000
³ Chlorofluorocarbon-114 (CFC-114; R-114; Dichlorotetrafluoroethane)	76-14-2	6,000
³ Chlorofluorocarbon-115 (CFC-115; R-115; Monochloropentafluoroethane)	76-15-3	6,000
³ Chlorofluorocarbon-12 (CFC-12; R-12; Dichlorodifluoromethane)	75-71-8	6,000
³ Chlorofluorocarbon-13 (CFC-13; R-13; Chlorotrifluoromethane)	75-72-9	6,000
³ Chlorofluorocarbon-211 (CFC-211; R-211)	422-78-6	6,000
³ Chlorofluorocarbon-212 (CFC-212; R-212)	3182-26-1	6,000
³ Chlorofluorocarbon-213 (CFC-213; R-213)	165-97-7	6,000
³ Chlorofluorocarbon-214 (CFC-214; R-214)	29255-31-0	6,000
³ Chlorofluorocarbon-215 (CFC-215; R-215)	4259-43-2	6,000
³ Chlorofluorocarbon-216 (CFC-216; R-216)	661-97-2	6,000
³ Chlorofluorocarbon-217 (CFC-217; R-217)	422-86-6	6,000
Chloroform	67-66-3	38.6
Chloromethyl methyl ether (CMME)	107-30-2	1.22
1-Chloro-1-nitropropane	600-25-9	2,378
p-Chloro-o-toluidene and p-Chloro-o-toluidene hydrochloride	95-69-2	11.5
4-Chloro-o-phenylene diamine (4-Chloro-1,2-benzenediamine)	95-83-0	193
Chloropicrin (Trichloronitromethane)	76-06-2	158
beta-Chloroprene	126-99-8	1.22
2-Chloropropionic acid	598-78-7	104
o-Chlorostyrene	2039-87-4	6,000
o-Chlorotoluene	95-49-8	6,000
Chlorozotocin	54749-90-5	0.0129
Chlorpyrifos	2921-88-2	47.1
Chromium (metal) and compounds other than Chromium (VI)	7440-47-3 ²	118
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3 ²	0.0740
Chromium (VI): compounds and particulates	7440-47-3 ²	0.0740
Chromyl chloride, as Cr	14977-61-8	0.0740
Cisplatin	15663-27-1	1.22
Coal dust, anthracite (respirable)	²	94.1
Coal dust, bituminous (respirable)	²	212
Cobalt, elemental, and inorganic compounds, as Co	7440-48-4	4.71
³ Coke oven emissions	²	1.43
Copper and compounds, fume, as Cu	7440-50-8	47.1
Copper and compounds, dusts and mists, as Cu	7440-50-8	235
p-Cresidine	120-71-8	20.7
Cresol (mixtures and isomers)	1319-77-3 ²	5,203
Crotonaldehyde	4170-30-3 ²	281
Crufomate	299-86-5	1,176
Cumene (Isopropyl benzene)	98-82-8	6,000
Cyanamide	420-04-2	471
Cyanides, (inorganics), as CN	143-33-9 ²	1,635
Cyanogen	460-19-5	5,008
Cyanogen chloride	506-77-4	247

Cyclohexanol	108-93-0	6,000
Cyclohexanone	108-94-1	6,000
Cyclohexylamine	108-91-8	6,000
Cyclonite	121-82-4	118
Cyclopentadiene	542-92-7	6,000
Cyclophosphamide	50-18-0	5.23
Cyclosporin A (Cyclosporine, Ciclosporin)	59865-13-3	1.22
Cyhexatin	13121-70-5	1,176
2,4-D, salts and esters	94-75-7	6,000
Dacarbazine	4342-03-4	0.0635
DDE	72-55-9	6,000
Demeton	8065-48-3	24.9
Diacetone alcohol	123-42-2	6,000
2,4-Diaminoanisole sulfate	39156-41-7	240
2,4-Diaminotoluene (Toluene-2,4-diamine)	95-80-7 ²	0.808
Diazinon	333-41-5	23.5
Diazomethane	334-88-3	80.9
Dibenz(a,h)acridine	226-36-8	8.08
Dibenz(a,j)acridine	224-42-0	8.08
Dibenz(a,h)anthracene	53-70-3	0.740
7H-Dibenzo(c,g)carbazole	194-59-2	0.808
Dibenzofurans	132-64-9	6,000
Dibenzo(a,e)pyrene	192-65-4	0.808
Dibenzo(a,h)pyrene	189-64-0	0.0808
Dibenzo(a,i)pyrene	189-55-9	0.0808
Dibenzo(a,l)pyrene	191-30-0	0.0808
³ Diborane	19287-45-7	26.6
1,2-Dibromemethane (Ethylene Dibromide; EDB)	106-93-4	4.04
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.442
2-N-Dibutylaminoethanol	102-81-8	834
Diethylphenyl phosphate	2528-36-1	826
Diethyl phthalate (Di-n-butyl phthalate)	84-74-2	1,176
Dichloroacetylene	7572-29-4	127
o-Dichlorobenzene (1,2-Dichlorobenzene)	95-50-1	6,000
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	80.8
3,3'-Dichlorobenzidine	91-94-1	2.61
1,4-Dichloro-2-butene	764-41-0	6.01
1,3-Dichloro-5,5-dimethyl hydantoin	118-52-5	47.1
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	9.16
1,1-Dichloroethane (Ethyldine dichloride)	75-34-3	6,000
1,2-Dichloroethane (Ethylene dichloride; EDC)	107-06-2	34.2
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111-44-4	6,000
1,2-Dichloroethylene	540-59-0	6,000
1,1-Dichloro-1-nitroethane	594-72-9	2,771
1,3-Dichloropropene	542-75-6	222
2,2-Dichloropropionic acid	75-99-0	1,176
Dichlorvos	62-73-7	44.4
Dicrotophos	141-66-2	58.8
Dicyclopentadiene	77-73-6	6,000
Dieldrin	60-57-1	58.8
Diepoxybutane	1464-53-5	1.22
Diesel exhaust particulates	²	444
Diethanolamine	111-42-2	471
Diethylamine	109-89-7	3,519
2-Diethylaminoethanol	100-37-8	2,255
Diethylene triamine	111-40-0	993
Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)	117-81-7	1,176
Diethyl phthalate	84-66-2	1,176
Diethylstilbestrol (DES)	56-53-1	0.00888
Diethyl sulfate	64-67-5	1.22
Diethyl ketone	96-22-0	100,000
1,1-Difluoroethane	75-37-6	6,000
Diglycidyl ether (DGE)	2238-07-5	125
Diglycidyl resorcinol ether	101-90-6	1.81
1,8-Dihydroxyanthroquinone (Danthon)	117-10-2	40.4
Diisobutyl ketone	108-83-8	6,000
Diisopropylamine	108-18-9	4,869
Dimethoxybenzidine and 3,3'-Dimethoxybenzidine hydrochloride (o-Dianisidine and o-	119-90-4	1.22

Dianisidine hydrochloride)		
N,N-Dimethyl acetamide	127-19-5	6,000
Dimethylamine	124-40-3	2,169
4-Dimethylaminoazobenzene	60-11-7	0.683
Dimethyl aniline (N,N-Dimethylaniline)	121-69-7	5,830
3,3'-Dimethylbenzidine (o-Tolidine)	119-93-7	1.22
Dimethyl carbamoyl chloride	79-44-7	0.240
Dimethylethoxysilane	14857-34-2	501
N,N-Dimethylformamide	68-12-2	2,665
1,1-Dimethylhydrazine	57-14-7	1.22
Dimethylphthalate	131-11-3	1,176
Dimethyl sulfate	77-78-1	1.22
Dimethylvinyl chloride (1-chloro-2-methylpropene)	513-37-1	68.3
Dinitolmide	148-01-6	1,176
Dinitrobenzene (mixtures and isomers)	528-29-0 ²	243
Dinitro-o-cresol (4,6-Dinitro-o-cresol)	534-52-1	47.1
2,4-Dinitrophenol	51-28-5	6,000
1,6-Dinitropyrene	42397-64-8	0.0808
1,8-Dinitropyrene	42397-65-9	0.808
Dinitrotoluene (mixtures and isomers)	25321-14-6 ²	47.1
n-Dioctyl phthalate	117-84-0	6,000
1,4-Dioxane (1,4-Diethylene oxide)	123-91-1	115
Dioxathion	78-34-2	47.1
Diquat, respirable dust (various compounds; Diquat dibromide)	2764-72-9 ²	23.5
Diquat, total dust (various compounds; Diquat dibromide)	2764-72-9 ²	118
Direct black 38 (Benzidine-based dye)	1937-37-7	0.423
Direct blue 6 (Benzidine-based dye)	2602-46-2	0.423
Disperse Blue 1	2475-45-8	683
Disulfiram	97-77-8	471
Disulfoton	298-04-4	23.5
Divinyl benzene (mixtures and isomers)	1321-74-0 ²	6,000
Endosulfan	115-29-7	23.5
Endrin	72-20-8	23.5
Enflurane	13838-16-9	6,000
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8	88.8
EPN	2104-64-5	23.5
1,2-Epoxybutane (1,2-Butylene oxide)	106-88-7	1,777
Estrogens, conjugated	²	1.22
Estrogens, not conjugated: Estrone	53-16-7	1.22
Estrogens, not conjugated: Ethynodiol diacetate	57-63-6	1.22
Ethanolamine	141-43-5	1,763
Ethion	563-12-2	94.1
⁴ 2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; cellosolve)	110-80-5	4,336
⁴ 2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; cellosolve acetate)	111-15-9	6,000
Ethyl acetate	141-78-6	100,000
Ethyl acrylate	140-88-5	4,817
Ethylamine (Ethanamine)	75-04-7	2,169
Ethyl amyl ketone	541-85-5	6,000
Ethyl benzene	100-41-4	6,000
Ethyl bromide	74-96-4	5,243
Ethyl tert-butyl ether (ETBE)	637-92-3	4,916
Ethyl butyl ketone	106-35-4	6,000
Ethyl chloride (Chloroethane)	75-00-3	6,000
Ethyl cyanoacrylate	7085-85-0	241
Ethylene chlorohydrin	107-07-3	1,077
Ethylenediamine	107-15-3	5,783
Ethylene glycol vapor and aerosol	107-21-1	6,000
Ethylene oxide	75-21-8	10.1
Ethylene thiourea	96-45-7	68.3
Ethylenimine (Aziridine)	151-56-4	207
Ethylidene norbornene	16219-75-3	6,000
Ethyl methanesulfonate	62-50-0	1.22
N-Ethylmorpholine	100-74-3	5,542
Ethyl silicate	78-10-4	6,000
Fenamiphos	22224-92-6	23.5
Fensulfothion	115-90-2	23.5
Fenthion	55-38-9	47.1

Fine mineral fibers (includes mineral fiber emissions from facilities manufacturing or processing glass, rock or slag fibers or other mineral derived fibers, of average diameter 1 micrometer or less)	²	6,000
Flour Dust (inhalable fraction)	²	118
Fluorides, (inorganics), as F	²	588
³ Fluorine	7782-41-4	366
Fonofos	944-22-9	23.5
Formaldehyde	50-00-0	68.3
Formamide	75-12-7	4,334
Formic acid	64-18-6	2,214
Furan	110-00-9	1.22
Furfural	98-01-1	1,849
Furfuryl alcohol	98-00-0	6,000
³ Germanium tetrahydride	7782-65-2	147
Glasswool, respirable size	²	1.22
Glutaraldehyde	111-30-8	67.0
Glycidol	556-52-5	1.22
⁵ Glycol ethers	²	6,000
Graphite (all forms except graphite fiber)	7782-42-5	471
³ Halon-1211 (Bromochlorodifluoromethane)	353-59-3	6,000
³ Halon-1301 (Bromotrifluoromethane)	75-63-8	6,000
³ Halon-2402 (Dibromotetrafluoroethane)	124-73-2	6,000
Halothane	151-67-7	6,000
Heptachlor and heptachlor epoxide	76-44-8	11.8
Hexachlorobenzene (HCB)	118-74-1	0.471
Hexachlorobutadiene	87-68-3	50.2
Hexachlorocyclopentadiene	77-47-4	26.2
Hexachloroethane	67-72-1	222
Hexachloronaphthalene	1335-87-1	47.1
Hexamethyl phosphoramide	680-31-9	1.22
Hexamethylene-1,6-diisocyanate (HDI)	822-06-0	0.888
n-Hexane	110-54-3	6,000
1,6- Hexanediamine	124-09-4	559
1-Hexene	592-41-6	6,000
sec-Hexyl acetate	108-84-9	6,000
Hexylene glycol	107-41-5	6,000
Hydrazine and hydrazine sulfate	302-01-2 ²	0.181
³ Hydrochlorofluorocarbon-121 (HCFC-121)	²	6,000
³ Hydrochlorofluorocarbon-122 (HCFC-122)	²	6,000
³ Hydrochlorofluorocarbon-123 (HCFC-123; R-123)	306-83-2 ²	6,000
³ Hydrochlorofluorocarbon-124 (HCFC-124; R-124)	63938-10-3 ²	6,000
³ Hydrochlorofluorocarbon-131 (HCFC-131)	²	6,000
³ Hydrochlorofluorocarbon-132b (HCFC-132b)	1649-08-7	6,000
³ Hydrochlorofluorocarbon-133a (HCFC-133a)	75-88-7	6,000
³ Hydrochlorofluorocarbon-141b (HCFC-141b; R-141b)	1717-00-6	6,000
³ Hydrochlorofluorocarbon-21 (HCFC-21; Dichlorofluoromethane)	75-43-4	6,000
³ Hydrochlorofluorocarbon-221 (HCFC-221)	²	6,000
³ Hydrochlorofluorocarbon-222 (HCFC-222)	²	6,000
³ Hydrochlorofluorocarbon-223 (HCFC-223)	²	6,000
³ Hydrochlorofluorocarbon-224 (HCFC-224)	²	6,000
³ Hydrochlorofluorocarbon-225ca (HCFC-225ca)	422-56-0	6,000
³ Hydrochlorofluorocarbon-225cb (HCFC-225cb)	507-55-1	6,000
³ Hydrochlorofluorocarbon-226 (HCFC-226)	²	6,000
³ Hydrochlorofluorocarbon-231 (HCFC-231)	²	6,000
³ Hydrochlorofluorocarbon-232 (HCFC-232)	²	6,000
³ Hydrochlorofluorocarbon-233 (HCFC-233)	²	6,000
³ Hydrochlorofluorocarbon-234 (HCFC-234)	²	6,000
³ Hydrochlorofluorocarbon-235 (HCFC-235)	²	6,000
³ Hydrochlorofluorocarbon-241 (HCFC-241)	²	6,000
³ Hydrochlorofluorocarbon-242 (HCFC-242)	²	6,000
³ Hydrochlorofluorocarbon-243 (HCFC-243)	²	6,000
³ Hydrochlorofluorocarbon-244 (HCFC-244)	²	6,000
³ Hydrochlorofluorocarbon-251 (HCFC-251)	²	6,000
³ Hydrochlorofluorocarbon-252 (HCFC-252)	²	6,000
³ Hydrochlorofluorocarbon-253 (HCFC-253)	²	6,000
³ Hydrochlorofluorocarbon-261 (HCFC-261)	²	6,000
³ Hydrochlorofluorocarbon-262 (HCFC-262)	²	6,000
³ Hydrochlorofluorocarbon-271 (HCFC-271)	²	6,000

³ Hydrochlorofluorocarbon-31 (HCFC-31; R-31; Chlorofluoromethane)	593-70-4	6,000
Hydrogenated terphenyls	61788-32-7	1,160
³ Hydrogen bromide	10035-10-6	3,247
³ Hydrogen chloride (Hydrochloric acid; Muriatic acid)	7647-01-0	1,777
³ Hydrogen cyanide	74-90-8	1,699
³ Hydrogen fluoride (Hydrofluoric acid)	7664-39-3	803
³ Hydrogen peroxide	7722-84-1	327
³ Hydrogen sulfide	7783-06-4	3,279
Hydroquinone	123-31-9	471
2-Hydroxypropyl acrylate	999-61-1	626
Indeno(1,2,3-cd)pyrene	193-39-5	8.08
Indium	7440-74-6	23.5
³ Iodine	7553-56-2	340
Iron dextran complex	9004-66-4	1.22
Iron oxide dust and fume, as Fe	1309-37-1	1,176
Iron salts, soluble, as Fe	²	235
Isobutyl acetate	110-19-0	100,000
Isobutyl alcohol	78-83-1	6,000
Isooctyl alcohol	26952-21-6	6,000
Isophorone	78-59-1	6,000
Isophorone diisocyanate	4098-71-9	10.7
Isoprene	78-79-5	1.22
⁴ 2- Isopropoxyethanol	109-59-1	6,000
Isopropylamine	75-31-0	2,843
Isopropyl glycidyl ether	4016-14-2	6,000
N-Isopropylaniline	768-52-5	2,602
Kaolin	1332-58-7	471
Kepone (Chlordecone)	143-50-0	0.193
Ketene	463-51-4	202
Lead Acetate, as Pb	301-04-2	11.1
Lead compounds	7439-92-1	² 6,000
Lead Phosphate, as Pb	7446-27-7	74.0
Lindane and other hexachlorocyclohexane isomers	58-89-9	² 2.87
Maleic anhydride	108-31-6	94.4
Manganese, elemental and inorganic compounds, as Mn	7439-96-5	² 47.1
Melphalan	148-82-3	0.0240
³ Mercury, as Hg, alkyl compounds	7439-97-6	² 2.35
³ Mercury, as Hg, aryl compounds	7439-97-6	² 23.5
³ Mercury, as Hg, inorganic forms including metallic mercury	7439-97-6	² 5.88
Mesityl oxide	141-79-7	6,000
Mestranol	72-33-3	1.22
Methacrylic acid	79-41-4	6,000
Methanol	67-56-1	6,000
Methomyl	16752-77-5	588
Methoxsalen (8-Methoxysoralen)	298-81-7	1.22
Methoxychlor	72-43-5	6,000
⁴ 2-Methoxyethanol (Methyl Cellosolve; EGME)	109-86-4	3,661
⁴ 2-Methoxyethyl acetate (MethylCellosolve acetate; EGMEA)	110-49-6	5,684
4-Methoxyphenol	150-76-5	1,176
³ Methyl chloroform (1,1,1-Trichloroethane; TCA)	71-55-6	6,000
Methyl ethyl ketone (2-Butanone; MEK)	78-93-3	6,000
Methyl acetate	79-20-9	100,000
Methyl acetylene	74-99-7	100,000
Methyl acrylate	96-33-3	1,657
Methylacrylonitrile	126-98-7	646
Methylamine	74-89-5	1,494
Methyl n-amyl ketone	110-43-0	6,000
N-Methyl aniline	100-61-8	516
Methyl bromide (Bromomethane)	74-83-9	444
Methyl n-butyl ketone	591-78-6	4,819
Methyl chloride (Chloromethane)	74-87-3	6,000
5- Methyl chrysene	3697-24-3	0.808
Methyl 2-cyanoacrylate	137-05-3	214
Methylcyclohexanol	25639-42-3	6,000
o-Methylcyclohexanone	583-60-8	6,000
Methyl demeton	8022-00-2	118
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	101-68-8	12.0
³ Methylene chloride (Dichloromethane)	75-09-2	1,890

4,4'-Methylene bis(2-chloroaniline) (MOCA)	101-14-4	2.07
Methylene bis(4-cyclohexylisocyanate)	5124-30-1	12.6
4,4'-Methylenedianiline (and dihydrochloride)	101-77-9 ²	1.93
Methyl ethyl ketone peroxide	1338-23-4	472
Methyl formate	107-31-3	6,000
Methyl hydrazine	60-34-4	4.43
Methyl iodide (Iodomethane)	74-88-4	2,732
Methyl isoamyl ketone	110-12-3	6,000
Methyl isobutyl carbinol	108-11-2	6,000
Methyl isobutyl ketone (MIBK; Hexone)	108-10-1	6,000
Methyl isocyanate	624-83-9	11.0
Methyl methacrylate	80-62-6	6,000
Methyl methanesulfonate	66-27-3	31.7
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	70-25-7	0.370
Methyl parathion	298-00-0	47.1
alpha-Methyl styrene	98-83-9	6,000
Methyl tert-butyl ether (MTBE)	1634-04-4	6,000
Methyl vinyl ketone	78-94-4	188
Metribuzin	21087-64-9	1,176
Metronidazole	443-48-1	1.22
Mevinphos (Phosdrin)	7786-34-7	21.2
Mirex	2385-85-5	0.174
Molybdenum, as Mo, metal and insoluble compounds	7439-98-7 ²	2,353
Molybdenum, as Mo, soluble compounds	7439-98-7 ²	1,176
Monocrotophos	6923-22-4	58.8
Morpholine	110-91-8	6,000
Mustard gas	505-60-2	1.22
Myleran (1,4-Butanediol dimethanesulphonate; busulphan)	55-98-1	1.22
Naled	300-76-5	706
Naphthalene	91-20-3	6,000
2-Naphthylamine	91-59-8	1.22
Nickel and compounds, as Ni	7440-02-0 ²	3.42
³ Nickel carbonyl, as Ni	13463-39-3	3.42
Nickel subsulfide, as Ni	12035-72-2	1.85
Nitric acid	7697-37-2	1,213
Nitrilotriacetic acid	139-13-9	592
p-Nitroaniline	100-01-6	706
o-Nitroanisole	91-23-6	1.22
Nitrobenzene	98-95-3	1,185
4-Nitrobiphenyl	92-93-3	6,000
p-Nitrochlorobenzene	100-00-5	152
6-Nitrochrysene	7496-02-8	0.0808
Nitroethane	79-24-3	6,000
Nitrofen	1836-75-5	38.6
Nitrogen mustards (2,2'-Dichloro-N-methyldiethylamine)	51-75-2	1.22
³ Nitrogen oxides	²	10,000
Nitromethane	75-52-5	6,000
4-Nitrophenol	100-02-7	6,000
1-Nitropropane	108-03-2	6,000
2-Nitropropane	79-46-9	1.22
1-Nitropyrene	5522-43-0	8.08
4-Nitropyrene	57835-92-4	8.08
N-Nitrosodi-n-butylamine	924-16-3	0.555
N-Nitrosodiethanolamine	1116-54-7	1.11
N-Nitrosodiethylamine	55-18-5	0.0207
N-Nitrosodimethylamine	62-75-9	0.0635
N-Nitrosodi-n-propylamine	621-64-7	0.444
N-Nitroso-N-ethylurea	759-73-9	0.115
4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	64091-91-4	1.22
N-Nitroso-N-methylurea	684-93-5	0.0261
N-Nitrosomethylvinylamine	4549-40-0	1.22
N-Nitrosomorpholine	59-89-2	0.468
N'-Nitrosonornicotine	16543-55-8	1.22
N-Nitrosopiperidine	100-75-4	0.329
N-Nitrosopyrrolidine	930-55-2	1.46
N-Nitrososarcosine	13256-22-9	1.22
Nitrotoluene (mixtures and isomers)	88-72-2 ²	2,639
Nitrous oxide	10024-97-2	6,000

Ochratoxin A	303-47-9	1.22
Octachloronaphthalene	2234-13-1	23.5
Octachlorostyrene	29082-74-4	10.0
Octane (all isomers)	111-65-9 ²	100,000
Oestradiol (Estradiol)	50-28-2	0.0808
Oxalic acid	144-62-7	235
P,p'-Oxybis(benzenesulfonyl hydrazide)	80-51-3	23.5
4,4'-Oxydianiline (2,4-Diaminophenyl ether)	101-80-4	1.22
Paraquat (respirable sizes) (Paraquat chloride)	1910-42-5 ²	23.5
Parathion	56-38-2	23.5
³ Particulate matter	²	10,000
Pentachlorobenzene	608-93-5	10.0
Pentachloronaphthalene	1321-64-8	118
Pentachloronitrobenzene (Quintobenzene; PCNB)	82-68-8	118
Pentachlorophenol (PCP)	87-86-5	118
Pentane, all isomers	78-78-4 ²	100,000
Petyl Acetate (mixtures and isomers)	628-63-7 ²	6,000
³ Perchloroethylene (Tetrachloroethylene)	127-18-4	151
Perchloromethyl mercaptan	594-42-3	179
Perfluoroisobutylene	382-21-8	26.7
Persulfates (Ammonium, Potassium, Sodium)	7727-54-0	23.5
Perylene	198-55-0	10.0
Phenacetin	62-44-2	1,410
Phenazopyridine and phenazopyridine hydrochloride	136-40-3 ²	18.1
Phenol	108-95-2	4,528
Phenolphthalein	77-09-8	1.22
Phenothiazine	92-84-2	1,176
Phenoxybenzamine hydrochloride	63-92-3	1.15
Phenylenediamine (mixtures and isomers)	106-50-3 ²	23.5
Phenyl ether vapor	101-84-8	1,638
Phenyl glycidyl ether (PGE)	122-60-1	145
Phenylhydrazine	100-63-0	104
Phenyl mercaptan	108-98-5	530
Phenytoin and sodium salt of phenytoin	57-41-0 ²	1.22
Phorate	298-02-2	11.8
Phosgene	75-44-5	95.2
³ Phosphine	7803-51-2	98.2
Phosphoric acid	7664-38-2	235
Phosphorus (yellow)	7723-14-0	23.8
Phosphorus oxychloride	10025-87-3	148
³ Phosphorus pentachloride	10026-13-8	200
Phosphorus pentasulfide	1314-80-3	235
³ Phosphorus trichloride	7719-12-2	264
Phthalic anhydride	85-44-9	1,425
Picric acid	88-89-1	23.5
Pindone	83-26-1	23.5
Platinum (metal)	7440-06-4	235
Platinum, soluble salts, as Pt	7440-06-4 ²	0.471
PM10	²	10,000
Polybrominated biphenyls (PBBs; Bromodiphenyls)	59536-65-1 ²	0.103
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	1336-36-3 ²	0.0500
Potassium hydroxide	1310-58-3	654
Procarbazine and procarbazine hydrochloride	366-70-1 ²	0.222
1,3-Propane sultone	1120-71-4	1.29
Propargyl alcohol	107-19-7	539
beta-Propiolactone	57-57-8	0.222
Propionaldehyde	123-38-6	6,000
Propionic acid	79-09-4	6,000
Propoxur (Baygon)	114-26-1	118
Propylene dichloride (1,2-Dichloropropane)	78-87-5	355
Propylene glycol monomethyl ether (PGME)	107-98-2	6,000
Propylene oxide	75-56-9	240
Propylenimine (2-Methyl aziridine; propylene imine)	75-55-8	1.22
Propylthiouracil	51-52-5	3.06
Pyrethrum	8003-34-7	1,176
Pyridine	110-86-1	3,373
Quinoline	91-22-5	6,000
Quinone	106-51-4	104

Resorcinol	108-46-3	6,000
Rhodium (metal) and insoluble compounds, as Rh	7440-16-6 ²	235
Rhodium, soluble compounds, as Rh	7440-16-6 ²	2.35
Rotenone (commercial)	83-79-4	1,176
Safrole	94-59-7	14.1
Selenium and compounds, as Se	7782-49-2 ²	47.1
³ Silicon tetrahydride (Silane)	7803-62-5	1,545
Sodium Azide, as sodium azide or hydrazoic acid vapor	26628-22-8	95.7
Sodium bisulfite	7631-90-5	1,176
Sodium fluoroacetate	62-74-8	11.8
Sodium hydroxide	1310-73-2	654
Sodium metabisulfite	7681-57-4	1,176
³ Stibine (Antimony hydride)	7803-52-3	120
Stoddard solvent (Mineral spirits)	8052-41-3	6,000
Streptozotocin	18883-66-4	0.0287
Strychnine	57-24-9	35.3
Styrene oxide	96-09-3	6,000
Styrene, monomer	100-42-5	6,000
Sulfallate	95-06-7	16.5
Sulfometuron methyl	74222-97-2	1,176
Sulfotep (TEDP)	3689-24-5	47.1
³ Sulfur dioxide	7446-09-5	10,000
Sulfur monochloride	10025-67-9	1,806
³ Sulfur tetrafluoride	7783-60-0	145
Sulfuric acid	7664-93-9	235
³ Sulfuryl fluoride	2699-79-8	4,911
Sulprofos	35400-43-2	235
Talc, containing no asbestos fibers	14807-96-6	471
Tamoxifen	10540-29-1	1.22
Tantalum, metal and oxide dusts, as Ta	7440-25-7	1,176
Tellurium and compounds, except hydrogen telluride, as Te	13494-80-9 ²	23.5
TEPP	107-49-3	11.8
Terphenyls	26140-60-3	1,635
Tetrachlorobenzene, 1,2,3,4-	634-66-2	10.0
Tetrachlorobenzene, 1,2,4,5-	95-94-3	10.0
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	1746-01-6	0.000050
1,1,2,2-Tetrachloroethane	79-34-5	1,615
Tetrachloronaphthalene	1335-88-2	471
³ 1,1,1,2-Tetrafluoroethane	811-97-2	6,000
Tetrafluoroethylene	116-14-3	1.22
Tetrahydrofuran	109-99-9	6,000
Tetranitromethane	509-14-8	1.22
Thallium, elemental and soluble compounds, as Tl	7440-28-0 ²	23.5
Thioacetamide	62-55-5	0.523
³ Thionyl chloride	7719-09-7	1,592
Thiourea	62-56-6	42.3
Thiram	137-26-8	235
Tin organic compounds, as Sn	7440-31-5 ²	23.5
Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn	7440-31-5 ²	471
Titanium tetrachloride	7550-45-0	6,000
Toluene (Toluol)	108-88-3	6,000
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)	584-84-9 ²	6.22
m- and p- Toluidine	108-44-1	2,062
o- Toluidine and o-toluidine hydrochloride and mixed isomers	95-53-4 ²	17.4
³ Total reduced sulfur and reduced sulfur compounds	²	10,000
Tributyl phosphate	126-73-8	513
Tributyl tin	56-35-9	10.0
Trichloroacetic acid	76-03-9	1,572
1,2,4-Trichlorobenzene	120-82-1	6,000
1,1,2-Trichloroethane	79-00-5	6,000
Trichloroethylene (Trichloroethene)	79-01-6	444
Trichloronaphthalene	1321-65-9	1,176
2,4,5-Trichlorophenol	95-95-4	6,000
2,4,6-Trichlorophenol	88-06-2	287
1,2,3-Trichloropropane	96-18-4	1.22
Triethanolamine	102-71-6	1,176
Triethylamine	121-44-8	974
Trifluralin	1582-09-8	6,000

1,3,5-Triglycidyl-s-triazinetrione	2451-62-9	11.8
Trimellitic anhydride	552-30-7	13.1
Trimethyl benzene (mixtures and isomers)	25551-13-7 ²	6,000
Trimethylamine	75-50-3	2,844
2,2,4-Trimethylpentane	540-84-1	6,000
2,4,6-Trinitrotoluene (TNT)	118-96-7	23.5
Triorthocresyl phosphate	78-30-8	23.5
Triphenyl phosphate	115-86-6	706
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	52-24-4	0.261
Tris(2,3-dibromopropyl phosphate)	126-72-7	1.35
Tungsten, as W, metal and insoluble compounds	7440-33-7 ²	1,176
Tungsten, as W, soluble compounds	7440-33-7 ²	235
Uranium (natural), soluble and insoluble compounds, as U	7440-61-1 ²	47.1
Urethane (Ethyl carbamate)	51-79-6	3.06
n-Valeraldehyde	110-62-3	6,000
Vanadium pentoxide, as V ₂ O ₅ , respirable dust and fume	1314-62-1	11.8
Vinyl acetate	108-05-4	6,000
Vinyl bromide	593-60-2	515
Vinyl chloride	75-01-4	101
Vinyl cyclohexene dioxide (4-vinyl-1-cyclohexene diepoxide)	106-87-6	1.22
4-Vinyl cyclohexene	100-40-3	104
Vinyl fluoride	75-02-5	443
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4	4,665
Vinylidene fluoride	75-38-7	100,000
Vinyl toluene	25013-15-4 ²	6,000
^{3,6} Volatile organic compounds (Reactive organic gases)		6,000
Warfarin	81-81-2	23.5
Xylene (mixtures and isomers) (Xylo; Dimethyl Benzene)	1330-20-7 ²	6,000
m-Xylene-a,a'-diamine	1477-55-0	32.7
Xyldidine (mixtures and isomers)	1300-73-8 ²	583
Yttrium metal and compounds, as Y	7440-65-5 ²	235
Zeolites (Eriomite)	66733-21-9	1.22
Zirconium and compounds, as Zr	7440-67-7 ²	1,176

¹Chemical Abstract Service or CAS number refers to the unique chemical abstracts service registry number assigned to a specific chemical, isomer or mixture of chemicals or isomers and recorded in the CAS chemical registry system by the Chemical Abstracts Service, PO Box 3012, Columbus OH 43210, phone 1-614-447-3600

²Indicates contaminants for which multiple CAS numbers may apply. For contaminants listed as a metal and its compounds, the given CAS number refers to the metal.

³Indicates contaminants for which a fee will be assessed under s. NR 410.04

⁴Indicates compounds included in the glycol ethers group. These are included in the glycol ethers emission total reported along with the many other such compounds not listed individually by name.

⁵Glycol ethers means any compound which can be described by the following chemical formula: R(OCH₂CH₂)_n-OR'

where:

n= 1, 2, or 3

R = alkyl C7 or less or R = phenyl or alkyl substituted phenyl

R' = H or alkyl C7 or less or

OR' = ester, sulfate, phosphate, nitrate or sulfonate (i.e. any group that will readily come off)

⁶Organic Compounds which are not volatile organic compounds because of negligible photochemical reactivity are specified in s. NR 400.02 (162)

SECTION 36. NR 439.03(4)(a)1. is amended to read:

NR439.03(4)(a)1. Hazardous air spills which require immediate notice to the department under s. NR

445.08 s. NR 445.15.

SECTION 37. NR 439.045 is created to read:

NR 439.045 Procedure for using an environmental management system (EMS) for recordkeeping, reporting and testing. An environmental management system may be used to demonstrate compliance with the best available control technology emission standard established for the source under ch. NR 445. This section only applies to the owner or operator of an iron foundry for the reduction of benzene and other hazardous air contaminants emitted from the casting process except as provided in sub. (3). The term EMS has the meaning provided in s. NR 400.02(61g). An EMS may be included within an air permit under the provisions of s. NR 407.09(2)(b).

(1) SELF CERTIFICATION OPTION. (a) The owner or operator of a source may provide the department with those portions of the objectives, targets and environmental management programs, contained in an EMS, that describe the recordkeeping, reporting and testing to demonstrate the reduction of emissions of hazardous air contaminants subject to control requirements.

(b) The EMS documentation shall be submitted to the department at the time of permit application. If the department determines the information submitted is incomplete or the objectives and targets in subd. 5. are not reasonable, this EMS alternative is deemed to not meet the requirements for demonstrating compliance with the best available control technology emission standard established for the source under ch. NR 445. Documentation shall include all of the following:

1. Baseline emissions.
2. Compliance certification requirements as specified in s. NR 407.09(4)(a)3.
3. Annual submittal of compliance certification requirements specified in s. NR 439.03(1)(c).
4. The responsible corporate official shall submit documentation to the department to certify the source's compliance status as specified in s. NR 439.03(8).
5. Objectives and targets including emission levels or rates for the emissions in question.
6. Environmental management program elements designating responsibility, means and time frame to achieve objectives and targets.
7. Training, awareness and competence elements to achieve control requirements.
8. Frequency of review and nature of adjustments for emission reduction objectives and targets and management program elements.

9. Information that would be reported to the department demonstrating progress in meeting objectives and targets, and actual emission reductions achieved.

(c) The department may request information from the EMS documentation from the following areas:

1. Environmental policy.
2. Environmental aspects.
3. Legal and other requirements.
4. Operational control.
5. Measurement and monitoring procedures.
6. Nonconformance and corrective and preventive actions.
7. Audit and management review.

(d) The department shall review the submission to determine whether it meets the requirements for demonstrating compliance with the best available control technology emission standard established for the source under ch. NR 445, taking into consideration all of the following:

1. Emission reduction objectives and targets and how they compare to the emission rates of comparable sources.
2. Objectives, targets and management program elements for research and development to reduce emissions.
3. Due diligence by the owner or operator to deliver environmental improvements.
4. Actions taken by the owner or operator to reduce other significant environmental impacts.
5. Prospective adjustments that may be made if objectives and targets are not met or management program elements are not completed.

(e) Annually, the owner or operator of the source shall submit to the department for its review all of the following, as applicable:

1. Actual progress in meeting the objectives and targets in the EMS.
2. Actual emissions for the hazardous air contaminants to which this EMS applies.
3. Any adjustments proposed for the objectives, targets and management program elements, or new objectives and targets to be added to the system.
4. Any audit and management review reports pertaining to this EMS.

5. Where objectives, targets and emission rate reductions are not being met or are off schedule, a corrective action plan to allow the source to meet the objectives, targets and emission reductions in a timely manner.

(f) The department will review the annual submission using the criteria in par. (d). If the department determines the information submitted is incomplete, the source shall have 30 days to submit the additional information requested by the department. The source shall be found in non-compliance with this section of its permit if:

1. The source fails to submit the additional annual report information requested by the department.
2. The source fails to implement its corrective action plan.

(2) THIRD PARTY CERTIFICATION OPTION. The owner or operator of the source shall comply with the requirements specified in the self certification option, sub. (1)(a), (b) and (d), and the following.

(a) The source shall submit to the department the entire results of the third party audit within 90 days of the source's receipt of the audit report. If the audit report does not contain current emission rate information, verified emission rate information under sub. (1)(b)5. shall also be included in the submission. If the audit finds noncompliance related to the objectives and targets for reduction of benzene or other hazardous pollutants, or if the verified emission rate information shows that the objectives and targets are not being met, the audit report shall be accompanied by a corrective action plan by the source. If the source does not adhere to the corrective action plan, they will be found in non-compliance with their permit.

(b) Sources whose third party audit report demonstrates compliance with their EMS, and who submit the data required under sub. (1)(b)5., will not be subject to inspections by the department, for emissions covered by this section, during the time they are in compliance with their EMS or corrective action plan, unless the department has reason to believe the source is violating provisions of their permit, state statutes and rules, or in situations of imminent threat to human health and the environment. In addition, the source will only be subject to reporting the information in sub. (1)(d) for those hazardous air contaminants covered by the EMS.

(3) OTHER SOURCE CATEGORIES. The secretary may authorize the use of this section by other source categories after reviewing an evaluation of the use of this section by the owners or operators of an iron foundry and conducting a public hearing.

SECTION 38. NR 445 Subchapter I (title) preceding s. NR 445.01 is created to read:

NR 445 (title) SUBCHAPTER I - GENERAL PROVISIONS

SECTION 39. NR 445.01(1)(a) is amended to read:

NR 445.01(1)(a) This chapter applies to all stationary air contaminant sources ~~which that~~ may emit hazardous ~~pollutants~~ contaminants and to their owners and operators. ~~The emission limitations and control requirements of this chapter do not apply to a source of a hazardous air contaminant regulated under chs. NR 446 to 449 for the specific hazardous air contaminants regulated under those chapters or to a source which must meet a national emission standard for a hazardous air pollutant promulgated under section 112 of the act (42 USC 7412) for the specific air pollutant regulated under that standard.~~

SECTION 40. NR 445.01(1)(b) is repealed and recreated to read:

NR 445.01(1)(b) The emission limitations and control requirements in this chapter do not apply to hazardous air contaminants emitted by the emissions units, operations or activities that are regulated by an emission standard promulgated under section 112 of the act (42 USC 7412). Hazardous air contaminants “regulated by an emission standard promulgated under section 112” means the hazardous air contaminants that are regulated by section 112 by the name of the contaminant, by virtue of regulation of another substance as a surrogate for the contaminant, or by virtue of regulation of a species or category of hazardous air contaminants that includes the contaminant.

SECTION 41. NR 445.01(1)(b) Note is created to read:

NR 445.01(1)(b) Note: An example of regulated “by virtue of regulation of another substance as a surrogate” would be using the measurement of one contaminant to represent the emission rate of another, harder to measure contaminant Examples of regulated “by virtue of the regulation of a species or category” would be the use of terms such as “volatile organic HAP” or “total HAP” emission in lieu of specifically naming individual hazardous air contaminants.

SECTION 42. NR 445.01(2) is amended to read:

NR 445.01(2) PURPOSE. This chapter is adopted under ss. 285.11, 285.13, 285.17 and 285.27, Stats., to establish emission limitations for hazardous ~~pollutants~~ contaminants from stationary sources.

SECTION 43. NR 445.02 (intro.) is amended to read:

NR 445.02 Definitions. (intro.) The definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter ~~and in chs. NR 446 to 449~~:

SECTION 44. NR 445.02(1), (2), (5), (9g), (10) and (11) are renumbered NR 400.02(27m), NR 447.02(4), NR 445.02(3), (11), (12) and (15)

SECTION 45. NR 445.02(3), (9) and (9m) are repealed.

SECTION 46. NR 445.02(4) is renumbered NR 445.02(1) and amended to read:

NR 445.02(1) "Best available control technology" or "BACT" means an emission limit for a hazardous air contaminant based on the maximum degree of reduction practically achievable as specified by the department on an individual case-by-case basis taking into account energy, economic and environmental impacts and other costs related to the source.

SECTION 47. NR 445.02(2), (4), (5), (9), (10), (13) and (14) are created to read:

NR 445.02(2) "Disposal" means the controlled discharge into the environment of a hazardous air contaminant for the explicit purpose of waste disposal.

(4) "Due diligence" means one of the following:

(a) A reasonable search and inquiry conducted by the owner or operator to identify and quantify emissions of hazardous air contaminants at the facility and determine which, if any, are subject to regulation under the provisions in subch. III and provisions identified in s. NR 445.06(1)(a) to (e). The search and inquiry is reasonable if it entails an investigation of all facility operations that the owner or operator determines are likely to cause emissions of any hazardous air contaminants that are any of the following:

1. Listed on an approved material safety data sheet or otherwise brought into the facility
2. Reasonably expected to be created through a combustion process or a manufacturing process
3. Contained in or created through the treatment or disposal of raw materials or waste.

(b) A review by the owner or operator of a source of incidental emissions of the criteria listed in s. NR 445.10 to determine whether the source is subject to regulation under s. NR 445.07 and those provisions identified in NR 445.06(1)(a) to (e).

(5) "Essential service" means an activity to provide any of the following:

- (a) Nuclear power plant emergency backup power generation.
- (b) Combustion turbine startup.
- (c) Safety or asset protection in an emergency situation.

Note: Examples include activities to provide emergency heating, ventilation, lighting, flood relief or spills response.

(9) "Manufacturer" means those engaged in the process of making, fabricating, finishing, constructing, forming or assembling a product from raw, unfinished, semifinished or finished materials. Packing, bottling, labeling and packaging are all considered to be manufacturing activities.

(10) "On-road fuel oil" means any diesel fuel or distillate product that is used, intended for use or made available for use as a fuel in diesel motor vehicles or diesel motor vehicle engines.

(13) "Seasonal source" means a stationary source that remains, or returns to, a single location for at least 2 years and that operates at that single location 3 months or more each year.

Note: The 2 years are calendar years. The 3 months do not need to be 3 consecutive months in the calendar year.

(14) "Treatment" means any method, technique or process, including thermal destruction, which changes the physical, chemical or biological character or composition of a hazardous air contaminant so as to render the contaminant less hazardous, safer for transport or management, amenable to recovery, convertible to another useable material or reduced in volume.

SECTION 48. NR 445.02(8)(intro.) is amended to read:

NR 445.02(8)(intro.) "Lowest achievable emission rate" or "LAER" means the rate of emission of a hazardous air contaminant which reflects the more stringent of the following:

SECTION 49. NR 445.03 is amended to read:

NR 445.03 General limitations. No person may cause, allow or permit emissions into the ambient air of any hazardous substance in a quantity, or concentration or for a duration which is injurious to human health, plant or animal life unless the purpose of that emission is for the control of plant or animal life. Hazardous substances

include but are not limited to the hazardous air contaminants listed in Tables 4 to 5 A to C of s. NR 445.04 s. NR 445.07.

SECTION 50. NR 445 Subchapter II (title) preceding s. NR 445.04 is created to read:

NR 445 (title) SUBCHAPTER II – EMISSION REQUIREMENTS FOR STATIONARY SOURCES
PRIOR TO DEMONSTRATION OF COMPLIANCE WITH SUBCHAPTER III

SECTION 51. NR 445.04 (title) is amended to read:

NR 445.04 (title) **Emission limits for new or modified sources last constructed or modified between October 1, 1988 and the effective date of this section... [revisor inserts date].**

SECTION 52. NR 445.04(intro.) is created to read:

NR 445.04 (intro.) The following requirements apply to sources last constructed or modified between October 1, 1988, or January 1, 1995 for sources subject to sub. (4r), and the effective date of this section... [revisor inserts date] prior to the applicable compliance dates for subch. III requirements specified in s. NR 445.08:

SECTION 53. NR 445.04(1)(intro.) and (a)2. are amended to read:

NR 445.04(1) TABLE 1 SUBSTANCES. (intro.) Except as provided in par. (c) or s. NR 406.07(2), no owner or operator of a stationary source on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] may cause, allow or permit emissions from a source of a hazardous air contaminant listed in Table 1 of this section in such quantity or duration as to cause ambient air concentrations off the source's property which exceed the limits in par. (a) or (b).

(a)2. Ten percent of the threshold limit value - time weighted average established by the American conference of governmental industrial hygienists, in the threshold limit values and biological exposure indices for 1987-1988, incorporated by reference in s. NR 484.11(2)(a), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines after complying with s. NR 445.06(1) s. NR 445.14(1) that such limits will not pose a threat to public health or welfare.

SECTION 54. NR 445.04(2) (intro.) is amended to read:

NR 445.04(2) TABLE 2 SUBSTANCES. (intro.) Except as provided in par. (c), no owner or operator of a stationary source which manufactures or processes pesticides, rodenticides, insecticides, herbicides or fungicides and on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date], may cause, allow or permit emissions from the source of a hazardous air contaminant listed in Table 2 of this section in such quantity or duration as to cause ambient concentrations which exceed the limits in par. (a) or (b).

SECTION 55. NR 445.04(3)(a) and (b) are amended to read:

NR 445.04(3)(a) *Group A.* Except as provided in par. (c), the owner or operator of any facility on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] and which emits any hazardous air contaminant listed in group A of Table 3 of this section in amounts greater than those listed in group A of Table 3 shall control emissions of those hazardous air contaminants to a level which is the lowest achievable emission rate. The lowest achievable emission rate shall be met by the emissions unit at the facility which emits the greatest amount of the hazardous air contaminant. If application of the lowest achievable emission rate to this emissions unit does not reduce facility emissions of the hazardous air contaminant to a level less than the rate listed in group A of Table 3 for the hazardous air contaminant, then the lowest achievable emission rate shall be met by other emissions units at the facility which emit decreasingly smaller amounts of the hazardous air contaminant until emissions from the facility are below the emission rate listed in group A of Table 3 or until all emissions units at the facility which emit at least 10% of the rate listed in group A of Table 3 for the hazardous air contaminant have met the lowest achievable emissions rate. If application of lowest achievable emissions rate to these emissions units does not result in the control of at least 50% of the potential emissions of the hazardous air contaminant from the facility, then the department may require application of lowest achievable emission rate on a reasonable array of smaller emissions units which emit the hazardous air contaminant.

(b) *Group B.* Except as provided in par. (c), the owner or operator of any facility on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] and which emits any hazardous air contaminant listed in group B of Table 3 of this section in amounts greater than those listed in group B of Table 3 shall control emissions of those hazardous air contaminants to a level which

is the best available control technology. The best available control technology shall be met by the emissions unit at the facility which emits the greatest amount of the hazardous air contaminant. If application of the best available control technology to this emissions unit does not reduce facility emissions of the hazardous air contaminant to a level less than the rate listed in group B of Table 3 for the hazardous air contaminant, then best available control technology shall be met by other emissions units at the facility which emit decreasingly smaller amounts of the hazardous air contaminant until emissions from the facility are below the emission rate listed in group B of Table 3 or until all emissions units at the facility which emit at least 10% of the rate listed in group B of Table 3 for the hazardous air contaminant have met best available control technology. If application of best available control technology to these emissions units does not result in the control of at least 50% of the potential emissions of the hazardous air contaminant from the facility, then the department may require application of best available control technology on a reasonable array of smaller emissions units which emit the hazardous air contaminant.

SECTION 56. NR 445.04(4)(intro.) and (a)2. are amended to read:

NR 445.04(4) TABLE 4 SUBSTANCES. (intro.) Except as provided in par. (c) or s. NR 406.07(2), no owner or operator of a stationary source on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] may cause, allow or permit emissions from a source of a hazardous air contaminant listed in Table 4 of this section in such quantity or duration as to cause ambient air concentrations off the source's property which exceed the limits in par. (a) or (b).

(a)2. Ten percent of the threshold limit value - time weighted average established by the American conference of governmental industrial hygienists, in the threshold limit values and biological exposure indices for 1990-1991, incorporated by reference in s. NR 484.11(2)(b), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines after complying with s. NR 445.06(1) s. NR 445.14(1) that such the limits will not pose a threat to public health or welfare.

SECTION 57. NR 445.04(4r)(a) is amended to read:

NR 445.04(4r)(a) *Annual limitations.* Except as provided in par. (b) or s. NR 406.07(2), no owner or operator of a stationary source on which construction or modification last commenced after between January 1, 1995

and the effective date of this section... [revisor inserts date], may cause, allow or permit emissions from the constructed or modified source of a hazardous air contaminant listed in Table 5 of this section in such quantity or duration as to cause ambient air concentrations off the source's property that exceed the reference concentration shown in Table 5 of this section on an annual basis.

SECTION 58. NR 445.04(5)(a) and (b) are amended to read:

NR 445.04(5)(a) Any owner or operator of a stationary source on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] and which combusts municipal solid waste as defined in s. NR 500.03(150) or infectious waste shall comply with subs. (1) and (4) and shall control emissions of hazardous air contaminants listed in Table 3 of this section to a level which is the lowest achievable emission rate.

(b) Any owner or operator of a stationary source on which construction or modification last commenced after between January 1, 1995 and the effective date of this section... [revisor inserts date] and which combusts municipal solid waste as defined in s. NR 500.03(150) or infectious waste shall comply with sub. (4r).

SECTION 59. NR 445.04(6)(a) is amended to read:

NR 445.04(6)(a) *Compliance timing.* Except as provided for in pars. (d), (e) and (f), any source which commences construction or modification after between October 1, 1988 and the effective date of this section... [revisor inserts date] shall meet the emission limitations in this section upon startup.

SECTION 60. NR 445.04(7) is repealed and recreated to read:

NR 445.04(7) An owner or operator of a source which has been granted a variance from an emission limitation in sub. (3)(a), (4r)(a) or (5) under this subsection as it existed prior to the effective date of this section... [revisor inserts date] shall continue to comply with all provisions related to the approval until such time that one of the following are satisfied:

(a) The department modifies, extends or rescinds the variance in accord with the provisions of s. NR 445.11.

(b) The owner or operator demonstrates compliance with all of the applicable requirements in s. NR 445.07 and completes all necessary revisions to a permit in accord with the provisions in chs. NR 406 and 407, as applicable.

SECTION 61. NR 445.05 (title) is amended to read:

NR 445.05 (title) Emission limits for existing sources constructed or last modified on or before October 1, 1988.

SECTION 62. NR 445.05(intro.) is created to read:

NR 445.04 (intro.) The following requirements apply to sources constructed or last modified on or before October 1, 1988, or January 1, 1995 for sources subject to sub. (4r), prior to the applicable compliance dates for subch. III requirements specified in s. NR 445.08:

SECTION 63. NR 445.05(1)(a)2. and (4)(a)2. are amended to read:

NR 445.05(1)(a)2. Ten percent of the threshold limit value - time weighted average established by the American conference of governmental industrial hygienists in the threshold limit values and biological exposure indices for 1987-1988, incorporated by reference in s. NR 484.11(2)(a), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines after complying with s. ~~NR 445.06(1)~~ s. NR 445.14(1) that such the limits will not pose a threat to public health or welfare.

(4)(a)2. Ten percent of the threshold limit value - time weighted average established by the American conference of governmental industrial hygienists in the threshold limit values and biological exposure indices for 1990-1991, incorporated by reference in s. NR 484.11(2)(b), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines under s. ~~NR 445.06(1)~~ s. NR 445.14(1) that such the limits will not pose a threat to public health or welfare.

SECTION 64. NR 445.05(6)(g) and (7) are repealed.

SECTION 65. NR 445.05(8) is repealed and recreated to read:

NR 445.05 (8) An owner or operator of a source which has been granted a variance from an emission limitation in sub. (3)(a), (4r)(a) or (5) under this subsection as it existed prior to the effective date of this section... [revisor inserts date] shall continue to comply with all provisions related to the approval until such time that one of the following are satisfied:

- (a) The department modifies, extends or rescinds the variance in accord with the provisions of s. NR 445.11.
- (b) The owner or operator demonstrates compliance with all of the applicable requirements in s. NR 445.07 and completes all necessary revisions to a permit in accord with the provisions in chs. NR 406 and 407, as applicable.

SECTION 66. NR 445.06 (title) and (1) are renumbered NR 445.14 (title) and (1) and amended to read:

NR 445.14 (title) Special provisions related to the control of Hazardous hazardous air contaminant contaminants review.

- (1) The department staff shall consult with the department of health and social family services prior to incorporating an emission limit under s. ss. NR 445.04(1)(a)2. or and (4)(a)2., 445.05(1)(a)2. and (4)(a)2., or 445.07(1)(b) in an order or a permit.

SECTION 67. NR 445.06(2) and (3) are repealed.

SECTION 68. NR 445.06(4) is renumbered NR 445.14(4) and amended to read:

NR 445.14(4) The department staff shall consult with the department of health and social family services prior to establishing an emission limit, in a permit or order, for any hazardous air contaminant which is not listed in Table 1, 2, 3 or 4 A, B or C of s. NR 445.04 or in threshold limit values and biological exposure indices for 1990-1991 adopted by the American conference of governmental industrial hygienists, incorporated by reference in s. NR 484.11 s. NR 445.07.

SECTION 69. NR 445.06(5) is repealed.

SECTION 70. NR 445.07 is renumbered NR 445.14(5).

SECTION 71. NR 445.08 is renumbered NR 445.15.

SECTION 72. NR 445 Subchapter III (title) preceding s. NR 445.06 and 445.06 to 445.13 are created to read:

**NR 445 (title) SUBCHAPTER III – EMISSION REQUIREMENTS, REVIEW AND NOTIFICATIONS
FOR STATIONARY SOURCES OF HAZARDOUS AIR CONTAMINANTS.**

NR 445.06 Safe Harbor. (1) A facility shall be deemed to be in compliance with this subchapter and applicable requirements in chs. NR 406, 407 and 438 for any hazardous air contaminant listed in Tables A, B or C of s. NR 445.07 if the contaminant is identified through due diligence and, the owner or operator determines that the emissions of the identified hazardous air contaminant are below the applicable regulatory threshold in this chapter or otherwise exempt from regulation, or the facility is meeting the applicable provisions set forth in this subchapter.

The applicable requirements in chs. NR 406, 407 and 438 include the following:

- (a) s. NR 406.04(2)(f) and (3)(a)
- (b) s. NR 407.03(2)(d)
- (c) s. NR 407.05(4)(c)1., 9. and 10.
- (d) s. NR 407.09(1)(c)1.b.
- (e) s. NR 438.03(1)

(2) The facility will not be deemed to be out of compliance with this subchapter or with the provisions identified in sub. (1)(a) to (e) for any hazardous air contaminant listed in Tables A, B or C of s. NR 445.07 for the period of time prior to either of the determinations in subd. 1. or 2. being made if no later than 90 days after the determination, the facility meets provisions applicable for the hazardous air contaminant. The department may, in writing, extend the 90 days for achieving compliance. The determinations are as follows:

1. A hazardous air contaminant that was not previously identified through due diligence is later determined to be emitted from the facility in an amount greater than the applicable emission threshold in any of the following:
 - a. Table A, B or C of s. NR 445.07
 - b. s. NR 406.04(2)(f) and (3)(a)

c. s. NR 407.03(2)(d)

d. Table 2 of s. NR 407.05

e. Table 2 of s. NR 438.03

2. A hazardous air contaminant previously identified and quantified is determined to be emitted in a greater amount, and that amount is greater than the applicable emission threshold for the provisions identified in subd. 1.a. to e.

NR 445.07 Emission thresholds, standards, control requirements and exemptions. (1) ALL SOURCES

OF HAZARDOUS AIR CONTAMINTS. Except as provided in sub. (5), the following requirements apply:

(a) No owner or operator of a source may cause, allow or permit emissions of a hazardous air contaminant listed in Table A in such quantity or concentration or for such duration as to cause an ambient air concentration of the contaminant off the source property which exceeds the ambient air standard in column (g) of Table A for the contaminant.

Note: Owners and operators of facilities emitting less than 3 tons of volatile organic compounds and 5 tons particulate matter on an annual basis, or who engage in limited or no manufacturing activities, should refer to s. NR 445.10 prior to determining applicable requirements under this section.

(b) The owner or operator of a source subject to par. (a) may request an alternative emission standard of 10% of the threshold limit value - time weighted average established by the American conference of governmental industrial hygienists, in the threshold limit values and biological exposure indices for 2000, incorporated by reference in s. NR 484.11(2)(c), for any contaminant with a 24-hour averaging period in column (h) of Table A if both of the following are satisfied:

1. The hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period.

2. The department determines, after consultation with the department of health and family services, that the alternative emission standard will not pose a threat to public health or welfare.

(c) The owner or operator of a source which emits a hazardous air contaminant for which a control requirement is identified in column (i) of Table A in a quantity greater than the amount listed in column (c), (d), (e) or (f) of Table A for the contaminant shall control emissions of the contaminant to the level identified in column (i) of the table. The control requirement shall be applied according to the procedure in s. NR 445.08(1)(d).

(2) MANUFACTURE, TREATMENT AND DISPOSAL OF PESTICIDES, RODENTICIDES, INSECTICIDES, HERBICIDES OR FUNGICIDES. For the owner or operator of a source that manufactures, treats or disposes of pesticides, rodenticides, insecticides, herbicides or fungicides, the following requirements apply in addition to the requirements of sub. (1), except as provided in sub. (5)(c) and (d):

(a) No owner or operator of a source that manufactures, treats or disposes of pesticides, rodenticides, insecticides, herbicides or fungicides may cause, allow or permit emissions of a hazardous air contaminant listed in Table B in such quantity or concentration or for such duration as to cause an ambient air concentration off the source property which exceeds the ambient air standard in column (g) of Table B for the contaminant.

(b) The owner or operator of a source which emits a hazardous air contaminant for which a control requirement is identified in column (i) of Table B in an amount greater than the amount listed in column (c), (d), (e) or (f) of Table B for the contaminant shall control emissions of the contaminant to the level identified in column (i) of the table. The control requirement shall be applied according to the procedure in s. NR 445.08(1)(d).

(3) MANUFACTURE, TREATMENT AND DISPOSAL OF PHARMACEUTICALS. In addition to sub. (1), except as provided in sub. (5)(c) and (d), the owner or operator of a source that manufactures, treats or disposes of pharmaceuticals and which emits a hazardous air contaminant for which a control requirement is identified in column (i) of Table C in an amount greater than the amount listed in column (c), (d), (e) or (f) of Table C for the contaminant shall control emissions of the contaminant to the level identified in column (i) of the table. The control requirement shall be applied according to the procedure in s. NR 445.08(1)(d).

(4) MUNICIPAL SOLID WASTE AND INFECTIOUS WASTE INCINERATORS. (a) Except as provided for in par. (b), any owner or operator of a source which combusts municipal solid waste as defined in s. NR 500.03(150) or infectious waste shall comply with sub. (1), and shall control emissions of hazardous air contaminants having a control requirement identified in column (i) in Table A, B or C to a level which is the lowest achievable emission rate. The control requirement shall be applied according to the procedure in s. NR 445.08(1)(d).

(b) A source which combusts no infectious waste and which combusts no municipal solid waste other than refuse derived fuel in a boiler is not subject to this subsection unless 50% or more of the boiler's heat input is obtained from the refuse derived fuel.

(5) EXEMPT EMISSIONS. Emissions from all of the following are exempt from the requirements of sub. (1), and emissions identified in pars. (c) and (d) are exempt under subs. (2) and (3):

- (a) Emissions from the combustion of group 1 virgin fossil fuels.
- (b) Emissions from the combustion of group 2 virgin fossil fuels vented from a stack which has downwash minimization stack height or a height approved by the department.
- (c) Emissions from a laboratory.
- (d)
 - 1. Indoor fugitive emissions with standards expressed as ambient air concentrations having a 1-hour or 24-hour averaging time in column (h) in Table A, B or C.
 - 2. Indoor fugitive emissions with standards expressed as control requirements in column (i) or as ambient air concentrations having an annual averaging time in column (h) in Table A, B or C which are exhausted to the ambient air through general building ventilation and which have a threshold limit value established by the American conference of governmental and industrial hygienists in the threshold limit values and biological exposure indices for 2000, incorporated by reference in s. NR 484.11(2)(c), and for which the source demonstrates to the department that it is in compliance with applicable occupational safety and health administration requirements.
- (e) Emissions with standards expressed as control requirements in column (i) of Table A from any gasoline dispensing facility which meets the requirements of s. NR 420.04(3)(b) to (i) and which dispenses less than 2 million gallons of gasoline a year.
- (f) Emissions with standards expressed as control requirements in column (i) of Table A from any gasoline dispensing facility which does not meet the requirements of s. NR 420.04(3)(b) to (i) and which dispenses less than 1.25 million gallons of gasoline a year.
- (g) Emissions of amorphous and crystalline silica.
- (h) Emissions of wood dusts.
- (i) Emissions with standards expressed as control requirements in column (i) of Table A from the combustion of wood by combustion units on which construction or modification last commenced on or before October 1, 1988 and which operate with good combustion technology. Good combustion technology means that technology which provides for a minimization of hazardous air contaminants with control requirements in column (i). Good combustion technology will be determined on a case-by-case basis by the department, taking into account the type of fuel to be burned, the economic and environmental impacts of the combustion, and other costs related to the source. Good combustion technology may include, but is not limited to, consideration of such factors as temperature, residence time, carbon monoxide emissions, excess oxygen, and turbulence.

Note: See department memo dated July 7, 1999, *Wood Combustion and Compliance with Chapter NR 445* for further information regarding the use of this exemption. The memo may be obtained by contacting the Bureau of Air Management's at 608-xxx-xxxx.

Table A
Emission Thresholds, Standards and Control Requirements for All Sources of Hazardous Air Contaminants

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points¹ (per averaging time expressed as lbs/hr or lbs/yr)				Ambient Air Standard (per averaging time expressed as micrograms per cubic meter)	Averaging Time for Standard and Threshold	Control Requirement
		<25 ft	25 to 40 ft	40 to 75 ft	≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Acetaldehyde	75-07-0	3.36	10.7	20.6	55.3	4,504	1Hr	N/A
	808	3,318	7,900	27,845	N/A	Annual	BACT	
Acetic acid	64-19-7	1.32	5.12	10.3	39.8	589	24 Hr	N/A
Acetic anhydride	108-24-7	1.12	4.36	8.79	33.9	501	24 Hr	N/A
Acetone Cyanohydrin, as CN	75-86-5	1.22	3.89	7.48	20.1	1,636	1Hr	N/A
	3,61	14.0	28.3	109	1,612	24 Hr	N/A	
Acetonitrile	98-86-2	2.64	10.3	20.7	79.7	1,179	24 Hr	N/A
Acetophenone	107-02-8	0.0170	0.0550	0.105	0.281	22.9	1Hr	N/A
Acrolein		0.00200	0.00600	0.0130	0.0490	0.720	24 Hr	N/A
Acrylamide	79-06-1	1.37	5.62	13.4	47.1	N/A	Annual	BACT
	178	730	1,738	6,126	1.00	141	24 Hr	N/A
Acrylic acid	79-10-7	0.317	1.23	2.48	9.56	1,00	Annual	N/A
	26.1	107	256	901	N/A	Annual	BACT	
Acrylonitrile	107-13-1		1.04	2.11	8.11	120	24 Hr	N/A
Adipic Acid	124-04-9	0.269	1.85	3.72	14.3	212	24 Hr	N/A
Adiponitrile	111-69-3	0.475		10.0	23.8	83.9	N/A	Annual
Aflatoxins	1402-68-2	2.43		0.248	0.500	1.93	28.5	LAER
Allyl alcohol	107-18-6	0.0640		0.653	1.32	5.07	75.1	24 Hr
	107-05-1	0.168		0.974	1.97	7.57	112	N/A
Allyl glycidyl ether	106-92-3	0.251		0.417	0.842	3.24	48.0	24 Hr
Aluminum alkyls and soluble salts, as Al	7429-90-5	0.107		1.04	2.11	8.11	120	N/A
Aluminum pyro powders, as Al	7429-90-5	0.269		6.64	15.8	55.7	N/A	Annual
o-Aminoazotoluene (2-Aminoazotoluene)	97-56-3	1.62		1.22	2.90	10.2	N/A	BACT
4-Aminobiphenyl	92-67-1	0.296		73,000	173,810	612,587	100	Annual
	17,769	0.935		3.63	7.33	28.2	418	24 Hr
Ammonia	7664-41-7							N/A
Ammonium perfluorooctanoate	3825-26-1	0.00100	0.00200	0.00400	0.0160	0.240	24 Hr	N/A
Aniline	62-53-3	0.409	1.59	3.21	12.4	183	24 Hr	N/A
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers)	2919-1-52-4	44.4	183	435	1,531	N/A	Annual	BACT
Antimony and compounds, as Sb	7440-36-0	0.0270	0.105	0.212	0.817	12.1	24 Hr	N/A
Antimony trioxide	1309-64-4	35.5	146	348	1,225	0.811	12.0	24 Hr
Arsenic, elemental and inorganic compounds, as As	7440-38-2	0.413	10.0	4.04	14.2	N/A	Annual	LAER

Arsine	7784-42-1	0.00900	0.0330	0.0670	0.258	3.83	24 Hr	N/A
Asbestos, all forms	1332-21-4	8.88	36.5	86.9	306	0.0500	Annual	N/A
Aziridine (Ethylenimine)	151-56-4	2.43	10.0	23.8	83.9	N/A	Annual	LAER
Barium soluble compounds, as Ba	7440-39-3	0.0470	0.184	0.371	1.43	21.1	24 Hr	N/A
Benz(a)anthracene	7440-39-3	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Benzene	56-55-3	16.2	66.4	158	557	N/A	Annual	BACT
Benzidine	71-43-2	228	936	2,228	7,854	N/A	Annual	LAER
Benzo(b)fluoranthene	205-99-2	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Benzo(k)fluoranthene	207-08-9	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Benz(o)pyrene	50-32-8	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Benzotrichloride	98-07-7	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Benzoyl chloride	98-88-4	0.215	0.684	1.31	3.53	287	1Hr	N/A
Benzoyl peroxide	94-36-0	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Benzyl acetate	140-11-4	3.30	12.8	25.9	99.6	1,474	24 Hr	N/A
Benzyl chloride	100-44-7	0.278	1.08	2.18	8.40	124	24 Hr	N/A
Beryllium and beryllium compounds, as Be	7440-41-7	0.740	3.04	7.24	25.5	N/A	Annual	BACT
Biphenyl	92-52-4	0.0680	0.263	0.531	2.05	30.3	0.0200	N/A
Bis(2-chloroethyl)ether (Dichloroethyl ether)	111-44-4	1.57	6.10	12.3	47.4	702	24 Hr	N/A
Bis(2-dimethylaminooethyl)ether (DMAEE)	3033-62-3	0.0180	0.0680	0.138	0.531	7.87	24 Hr	N/A
Bis(2-ethyl hexyl) phthalate (Diethyl hexyl phthalate)	117-81-7	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Bismuth telluride, as Bi ₂ Te ₃ ; Se-Doped	1304-82-1	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Borates, tetra, sodium salts, decahydrate	1303-96-4	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Borates, tetra, sodium salts, pentahydrate	1303-96-4	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Boron trifluoride	10294-33-4	0.765	2.44	4.69	12.6	1,025	1Hr	N/A
Boron trifluoride	7637-07-2	0.207	0.660	1.27	3.40	277	1Hr	N/A
Bromine	7726-95-6	0.0350	0.136	0.275	1.06	15.7	24 Hr	N/A
Bromine pentaffluoride	7789-30-2	0.0380	0.149	0.301	1.16	17.2	24 Hr	N/A
Bromodichloromethane	75-27-4	48.0	197	470	1,656	N/A	Annual	BACT
Bromodiphenyls (Polybrominated biphenyls; PBBs)	59536-65-1	0.207	0.849	2.02	7.12	N/A	Annual	BACT
Bromoform	75-25-2	0.278	1.08	2.18	8.38	124	24 Hr	N/A
1,3-Butadiene	106-99-0	6.35	26.1	62.1	219	N/A	Annual	BACT
2-Butoxyethanol (Ethylene glycol monobutyl ether; EGBE; Butyl Cellosolve)	111-76-2	5.19	20.2	40.7	157	2,320	24 Hr	N/A
n-Butyl acrylate	141-32-2	0.563	2.19	4.41	17.0	252	24 Hr	N/A
n-Butylamine	109-73-9	1.12	3.56	6.84	18.4	1,496	1Hr	N/A
n-butyl alcohol (n-Butanol)	71-36-3	11.3	36.0	69.3	186	15,157	1Hr	N/A
Butylated hydroxyanisole (BHA)	25013-16-5	31.173	128.070	304.929	1,074,715	N/A	Annual	BACT
Butyl Cellosolve (2-Butoxyethanol; ethylene glycol monobutyl ether; EGBE)	111-76-2	5.19	20.2	40.7	157	2,320	24 Hr	N/A
tert-Butyl chromate, as Cr	1189-85-1	0.00700	0.0240	0.0460	0.123	10.0	1Hr	N/A
n-Butyl glycidyl ether (BGE)	2426-08-6	7.15	27.8	56.1	216	3,195	24 Hr	LAER

n-Butyl lactate	138-22-7	1.61	6.24	12.6	48.5	717	24 Hr	N/A
o-sec-Butylphenol	89-72-5	1.65	6.41	12.9	49.8	737	24 Hr	N/A
p-tert-Butyltoluene	98-51-1	0.326	1.26	2.55	9.83	145	24 Hr	N/A
C.I. Basic Red 9 monohydrochloride	569-61-9	25.0	103	245	863	N/A	Annual	BACT
Cadmium and cadmium compounds, as Cd	7440-43-9	0.987	4.06	9.66	34.0	N/A	Annual	LAER
Calcium cyanamide	156-62-7	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Calcium hydroxide	1305-62-0	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Calcium oxide	1305-78-8	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
Camphor (synthetic)	76-22-2	0.669	2.60	5.24	20.2	299	24 Hr	N/A
Caprolactam (aerosol and vapor)	105-60-2	1.24	4.83	9.74	37.5	555	24 Hr	N/A
Carbon black	1333-86-4	0.188	0.730	1.47	5.68	84.0	24 Hr	N/A
Carbon disulfide	75-15-0	124-381	511,000	1,216,667	4,288,112	700	Annual	N/A
Carbon tetrabromide	558-13-4	0.0730	0.283	0.571	2.20	32.6	24 Hr	N/A
Carbon tetrachloride	56-23-5	118	487	1,159	4,084	N/A	Annual	BACT
Carbonyl Fluoride	353-50-4	0.290	1.13	2.27	8.76	130	24 Hr	N/A
Catechol (Pyrocatechol)	120-80-9	1.21	4.70	9.48	36.5	540	24 Hr	N/A
Cellosolve (2-Ethoxyethanol; EGEE)	110-80-5	0.990	3.85	7.76	29.9	442	24 Hr	N/A
Cellulosolve acetate (2-Ethoxyethyl acetate; EGEEA)	111-15-9	1.45	5.64	11.4	43.8	649	24 Hr	N/A
Ceramic Fibers (respirable size)		2.43	10.0	23.8	83.9	N/A	Annual	BACT
Cesium hydroxide	21351-79-1	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
Chlordecone (Kepone)	143-50-0	0.386	1.59	3.78	13.3	N/A	Annual	BACT
Chlorendic acid	115-28-6	68.3	281	668	2,356	N/A	Annual	BACT
Chlorinated diphenyl oxide	55720-99-5	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Chlorinated paraffins (C12; 60% chlorine)	108171-26-2	71.1	292	695	2,450	N/A	Annual	BACT
Chlorine	7782-50-5	0.0780	0.303	0.611	2.35	34.8	24 Hr	N/A
Chlorine dioxide	10049-04-4	0.0150	0.0580	0.116	0.447	6.62	24 Hr	N/A
Chlorine trifluoride	7790-91-2	0.0280	0.0900	0.173	0.464	37.8	1Hr	N/A
p-Chloro-o-toluidene and p-Chloro-o-toluidene hydrochloride	95-69-2	23.1	94.8	226	796	N/A	Annual	BACT
Chloroacetone	78-95-5	0.283	0.900	1.73	4.64	378	1Hr	N/A
2-Chloroacetophenone	532-27-4	0.0170	0.0660	0.133	0.513	7.59	24 Hr	N/A
Chloroacetyl chloride	79-04-9	0.0120	0.0480	0.0970	0.375	5.54	24 Hr	N/A
Chlorobenzene (Monochlorobenzene)	108-90-7	2.47	9.61	19.4	74.7	1,05	24 Hr	N/A
4-Chloro-1,2-benzenediamine (4-Chloro-o-phenylenediamine)	95-83-0	386	1.587	3.778	13,317	N/A	Annual	BACT
o-Chlorobenzylidene malononitrile	2698-41-1	0.0290	0.0920	0.176	0.473	38.6	1Hr	N/A
1-Chloro-1,1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b)	75-68-3	8,884,381	36,500,000	86,904,762	306,293,706	50,000	Annual	N/A
Chlorodifluoromethane (Hydrochlorofluorocarbon-22; HCFC-22; R-22)	75-45-6	8,884,381	36,500,000	86,904,762	306,293,706	50,000	Annual	BACT
Chlorodiphenyls (Polychlorinated biphenyls; PCBs)	1336-36-3	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
1-Chloro-2,3-epoxypropane (Epichlorohydrin)	106-89-8	0.102	0.395	0.797	3.07	45.4	24 Hr	N/A
	178		730	1,738	6,126	1.00	Annual	N/A

		1,481	6,083	14,484	51,049	N/A	Annual	BACT
Chloroethane (Ethyl chloride)	75-00-3	14.2	55.1	111	428	6,333	24 Hr	N/A
Chloroform	1,776,876	7,300,000	17,380,952	61,258,741	10,000	Annual	Annual	N/A
Chloromethane (Methyl chloride)	67-66-3	2.62	10.2	20.6	79.2	1,172	24 Hr	N/A
4-Chloro- <i>p</i> -phenylene diamine (4-Chloro-1,2-benzenediamine)	67-66-3	77.3	317	756	2,663	N/A	Annual	BACT
beta-Chloroprene	74-87-3	5.55	21.5	43.5	167	2,478	24 Hr	N/A
2-Chloropropionic acid	598-78-7	0.0240	0.0930	0.187	0.720	10.7	24 Hr	N/A
<i>o</i> -Chlorostyrene	2039-87-4	15.2	59.2	119	460	6,802	24 Hr	N/A
<i>o</i> -Chlorotoluene	95-49-8	13.9	54.0	109	420	6,213	24 Hr	N/A
Chromium (metal) and compounds other than Chromium (VI)	126-99-8	2.43	10.0	23.8	83.9	N/A	Annual	LAER
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3	1.42	5.84	13.9	49.0	0.00800	Annual	N/A
Chromium (VI): compounds and particulates	7440-47-3	0.148	0.608	1.45	5.10	N/A	Annual	LAER
Chromyl chloride, as Cr	14977-61-8	0.148	0.608	1.45	5.10	N/A	Annual	N/A
Coal dust, anthracite (respirable)	0.0210	0.0830	0.168	0.649	9.60	24 Hr	N/A	
Coal dust, bituminous (respirable)	0.0480	0.188	0.379	1.46	21.6	24 Hr	N/A	
Cobalt,elemental, and inorganic compounds, as Co	7440-48-4	0.00100	0.00400	0.00800	0.0320	0.480	24 Hr	N/A
Coke oven emissions	2.87	11.8	28.0	98.8	N/A	Annual	LAER	
Copper and compounds, dusts and mists, as Cu	7440-50-8	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Copper and compounds, fume, as Cu	7440-50-8	0.0110	0.0420	0.0840	0.324	4.80	24 Hr	N/A
D-Cresidine	120-71-8	41.3	170	404	1,425	N/A	Annual	BACT
Cresol (mixtures and isomers)	1319-77-3	1.19	4.62	9.31	35.9	531	24 Hr	N/A
Crotonaldehyde	4170-30-3	0.0640	0.205	0.393	1.06	86.0	1Hr	N/A
Cumene (Isopropyl benzene)	98-82-8	13.2	51.3	103	399	5,899	24 Hr	N/A
Cyanamide	420-04-2	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
Cyanides, (inorganics), as CN	143-33-9	0.373	1.19	2.29	6.13	500	1Hr	N/A
Cyanogen	460-19-5	1.14	4.44	8.96	34.5	511	24 Hr	N/A
Cyanogen chloride	506-77-4	0.0560	0.179	0.345	0.926	75.4	1Hr	N/A
Cyclohexanol	108-93-0	11.0	42.7	86.2	332	4,916	24 Hr	N/A
Cyclohexanone	108-94-1	5.17	20.1	40.5	156	2,311	24 Hr	N/A
Cyclohexylamine	108-91-8	2.18	8.46	17.1	65.8	973	24 Hr	N/A
Cyclonite	121-82-4	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Cyclopentadiene	542-92-7	10.9	42.3	85.4	329	4,866	24 Hr	N/A
Danthron (1,8-Dihydroxyanthroquinone)	117-10-2	80.8	332	790	2,784	N/A	Annual	BACT
DBCP (1,2-Dibromo-3-chloropropane)	96-12-8	0.935	3.84	9.15	32.2	N/A	Annual	BACT
DDT (Dichlorodiphenyltrichloroethane)	50-29-3	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Diacetone alcohol	123-42-2	12.8	49.6	100	385	5,701	24 Hr	N/A

2,4-Diaminoanisole sulfate		39156-41-7	480	1,973	4,698	16,556	N/A	Annual	BACT
2,4-Diaminophenyl ether (4,4'-Oxydianiline)		101-80-4	2,43	10.0	23.8	83.9	N/A	Annual	BACT
2,4-Diaminotoluene (Toluene-2,4-diamine)		95-80-7	1,62	6.64	15.8	55.7	N/A	Annual	BACT
o-Dianisidine and o-Dianisidine hydrochloride (3,3'-Dimethoxybenzidine and 3,3'-Dimethoxybenzidine hydrochloride)		119-90-4	2,43	10.0	23.8	83.9	N/A	Annual	BACT
Diazomethane		334-88-3	0,0180	0,0720	0,145	0,558	8,25	24 Hr	N/A
Dibenz(a,h)acridine		226-36-8	16,2	66,4	158	557	N/A	Annual	BACT
Dibenz(a,j)acridine		224-42-0	16,2	66,4	158	557	N/A	Annual	BACT
Dibenz(a,h)anthracene		53-70-3	1,48	6,08	14,5	51,0	N/A	Annual	BACT
7H-Dibenzo(c,g)carbazole		194-59-2	1,62	6,64	15,8	55,7	N/A	Annual	BACT
Dibenz(a,e)pyrene		192-65-4	1,62	6,64	15,8	55,7	N/A	Annual	BACT
Dibenz(a,h)pyrene		189-64-0	0,162	0,664	1,58	5,57	N/A	Annual	BACT
Dibenz(a,i)pyrene		189-55-9	0,162	0,664	1,58	5,57	N/A	Annual	BACT
Dibenz(a,l)pyrene		191-30-0	0,162	0,664	1,58	5,57	N/A	Annual	BACT
Diborane		19287-45-7	0,00600	0,0240	0,0480	0,184	2,72	24 Hr	N/A
1,2-Dibromo-3-chloropropane (DBCP)		96-12-8	0,935	3,84	9,15	32,2	N/A	Annual	BACT
1,2-Dibromoethane (Ethylene dibromide; EDB)		106-93-4	8,08	33,2	79,0	278	N/A	Annual	BACT
2-N-Dibutylaminoethanol		102-81-8	0,190	0,740	1,49	5,75	85,1	24 Hr	N/A
DiButyl(phenyl)phosphate		2528-36-1	0,189	0,733	1,48	5,70	84,3	24 Hr	N/A
DiButyl phthalate (Di-n-butyl phthalate)		84-74-2	0,269	1,04	2,11	8,11	120	24 Hr	N/A
Dichloroacetylene		7572-29-4	0,0290	0,0920	0,178	0,476	38,8	1Hr	N/A
o-Dichlorobenzene (1,2-Dichlorobenzene)		95-50-1	8,07	31,4	63,3	244	3,608	24 Hr	N/A
p-Dichlorobenzene (1,4-Dichlorobenzene)		106-46-7	162	664	1,580	5,569	N/A	Annual	BACT
		142,150	584,000	1,390,476	4,900,699	800		Annual	N/A
3,3'-Dichlorobenzidine		91-94-1	5,23	21,5	51,1	180	N/A	Annual	BACT
1,4-Dichloro-2-butene		764-41-0	0,00100	0,00500	0,0110	0,0410	0,613	24 Hr	N/A
1,3-Dichloro-5,5-dimethylhydantoin		118-52-5	0,0110	0,0420	0,0840	0,324	4,80	24 Hr	N/A
Dichlorodiphenyltrichloroethane (DDT)		50-29-3	18,3	75,3	179	632	N/A	Annual	BACT
1,1-Dichloroethane (Ethylidene dichloride)		75-34-3	21,7	84,5	170	656	9,715	24 Hr	N/A
1,2-Dichloroethane (Ethylene dichloride; EDC)		107-06-2	68,3	281	668	2,356	N/A	Annual	BACT
Dichloroethyl ether (Bis(2-chloroethyl)ether)		111-44-4	1,57	6,10	12,3	47,4	702	24 Hr	N/A
1,1-Dichloroethylene (Vinylidene chloride)		75-35-4	1,06	4,14	8,35	32,2	476	24 Hr	N/A
1,2-Dichloroethylene		540-59-0	42,6	166	334	1,286	19,033	24 Hr	N/A
Dichloromethane (Methylene chloride)		75-09-2	9,33	36,2	73,1	282	4,168	24 Hr	N/A
		3,781	15,532	36,981	130,338	N/A		Annual	BACT
1,1-Dichloro-1-nitroethane		594-72-9	0,633	2,46	4,96	19,1	283	24 Hr	N/A
1,2-Dichloropropane (Propylene dichloride)		78-87-5	18,6	72,3	146	562	8,318	24 Hr	N/A
Dicyclopentadiene		77-73-6	1,45	2,920	6,952	24,503	4,00	Annual	N/A
Diepoxybutane		1464-53-5	2,43	10,0	23,8	83,9	649	24 Hr	N/A
								Annual	BACT

Diesel exhaust particulates		888	3,650	8,690	30,629	5,00	Annual	N/A
Diethanolamine	111-42-2	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
Diethylamine	109-89-7	0.803	3.12	6.30	24.3	359	24 Hr	N/A
2-Diethylaminoethanol	100-37-8	0.515	2.00	4.04	15.5	230	24 Hr	N/A
Diethylene triamine	111-40-0	0.227	0.881	1.78	6.84	101	24 Hr	N/A
Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)	117-81-7	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Diethyl phthalate	84-66-2	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Diethyl sulfate	64-67-5	2.43	10.0	23.8	83.9	N/A	Annual	BACT
1,4-Diethylene oxide (1,4-Dioxane)	123-91-1	3.87	15.0	30.3	117	1,730	24 Hr	N/A
1,1-Difluoroethane	75-37-6/7,107,505	29,200,000	69,523,810	245,034,965	40,000	Annual	Annual	BACT
Diglycidyl ether (DGE)	2238-07-5	0.0290	0.111	0.224	0.863	12.8	24 Hr	N/A
Diglycidyl resorcinol ether	101-90-6	3.63	14.9	35.5	125	N/A	Annual	BACT
1,8-Dihydroxyanthroquinone (Danthon)	117-10-2	80.8	332	790	2,784	N/A	Annual	BACT
Diisobutyl ketone	108-83-8	7.81	30.4	61.2	236	3,490	24 Hr	N/A
Disopropylamine	108-18-9	1.11	4.32	8.71	33.6	497	24 Hr	N/A
Dimethoxybenzidine and 3,3'-Dimethoxybenzidine hydrochloride (o-Dianisidine and o-Dianisidine hydrochloride)	119-90-4	2.43	10.0	23.8	83.9	N/A	Annual	BACT
N,N-Dimethyl acetamide	127-19-5	1.91	7.44	15.0	57.8	855	24 Hr	N/A
Dimethylamine	124-40-3	0.495	1.92	3.88	14.9	221	24 Hr	N/A
4-Dimethylaminooazobenzene	60-11-7	1.37	5.62	13.4	47.1	N/A	Annual	BACT
Dimethylaniline (N,N-Dimethylaniline)	121-69-7	1.33	5.17	10.4	40.2	595	24 Hr	N/A
Dimethylbenzene (Xylene)(mixtures and isomers); Xylool	1330-20-7	23.3	90.6	183	704	10,421	24 Hr	N/A
3,3'-Dimethylbenzidine (o-Tolidine)	119-93-7	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Dimethyl carbamoyl chloride	79-44-7	0.480	1.97	4.70	16.6	N/A	Annual	BACT
Dimethylmethoxysilane	14857-34-2	0.114	0.445	0.897	3.46	51.1	24 Hr	N/A
N,N-Dimethylformamide	68-12-2	1.61	6.24	12.6	48.5	717	24 Hr	N/A
1,1-Dimethylhydrazine	57-14-7	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Dimethylphthalate	131-11-3	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Dimethyl sulfide	77-78-1	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Dimethylvinyl chloride (1-Chloro-2-methylpropene)	513-37-1	137	562	1,337	4,712	N/A	Annual	BACT
Dinitolmide	1480-1-6	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Dinitrobenzene (mixtures and isomers)	528-29-0	0.0550	0.215	0.434	1.67	24.8	24 Hr	N/A
1,6-Diniutropyene	42397-64-8	0.162	0.664	1.58	5.57	N/A	Annual	BACT
1,8-Diniutropyene	42397-65-9	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Dinitrotoluene (mixtures and isomers)	25321-14-6	0.0110	0.0420	0.0840	0.324	4.80	24 Hr	N/A
1,4-Dioxane (1,4-Diethylene oxide)	123-91-1	231	948	2,257	7,956	N/A	Annual	BACT
Dioxins and Furans, chlorinated (2,3,7,8-Tetrachlorodibenz-p-dioxin), as equivalents	1746-01-6	0.000100	0.000100	0.000100	0.000100	N/A	Annual	LAER

Direct black 38 (Benzidine-based dye)		1937-37-7	0.846		3.48		8.28		29.2		N/A		Annual	BACT
Direct blue 6 (Benzidine-based dye)		2602-46-2	0.846		3.48		8.28		29.2		N/A		Annual	BACT
Disperse Blue 1		2475-45-8	1.367	5,615	13,370		47,122		N/A		Annual		Annual	BACT
Disulfiram		97-77-8	0.107	0.417	0.842		3.24		48.0		24 Hr		N/A	
Divinyl benzene (mixtures and isomers)		1321-74-0	2.86	11.1	22.4		86.3		1,278		24 Hr		N/A	
EGBE (2-Butoxyethanol; Ethylene glycol monobutyl ether; butyl cellosolve)		111-76-2	5.19	20.2	40.7		157		2,320		24 Hr		N/A	
EGEE (2-Ethoxyethanol; Ethylene glycol monoethyl ether; cellosolve)		110-80-5	0.990	3.85	7.76		29.9		442		24 Hr		N/A	
EGEEA (2-Ethoxyethyl acetate; Ethylene glycol monoethyl ether acetate; Cellosolve acetate)		35,538	146,000	347,619	1,225,175		200		Annual		Annual		N/A	
Enflurane		111-15-9	1.45	5.64	11.4		43.8		649		24 Hr		N/A	
Epichlorohydrin (1-Chloro-2,3-epoxypropane)		109-86-4	0.836	3.25	6.55		25.2		373		24 Hr		N/A	
EGMEA (2-Methoxyethyl acetate; MethylCellosolve acetate)		110-49-6	1.30	5.04	10.2		39.2		580		24 Hr		N/A	
1,2-Epoxybutane (1,2-Butylene oxide)		106-89-8	0.102	0.395	0.797		3.07		45.4		24 Hr		N/A	
Erionite (Zeolites)		66733-21-9	2.43	10.0	23.8		83.9		N/A		Annual		N/A	
Ethanolamine (Ethylamine)		75-04-7	0.495	1.92	3.88		14.9		221		24 Hr		N/A	
Ethanolamine		141-43-5	0.403	1.56	3.16		12.2		180		24 Hr		N/A	
2-Ethoxyethanol (Ethylene glycol monethyl ether; EGEE; Cellosolve)		110-80-5	0.990	3.85	7.76		29.9		442		24 Hr		N/A	
2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; cellosolve acetate)		111-15-9	1.45	5.64	11.4		43.8		649		24 Hr		N/A	
Ethyl acrylate		140-88-5	1.10	4.27	8.62		33.2		491		24 Hr		N/A	
Ethyamine (Ethanamine)		75-04-7	0.495	1.92	3.88		14.9		221		24 Hr		N/A	
Ethyl amyl ketone		541-85-5	7.04	27.4	55.2		213		3,146		24 Hr		N/A	
Ethyl benzene		100-41-4	23.3	90.6	183		704		10,421		24 Hr		N/A	
Ethyl bromide		74-96-4	1.20	4.65	9.38		36.1		535		24 Hr		N/A	
Ethyl tert-butyl ether (ETBE)		637-92-3	1.12	4.36	8.80		33.9		501		24 Hr		N/A	
Ethyl butyl ketone		106-35-4	12.5	48.7	98.3		379		5,604		24 Hr		N/A	
Ethyl carbamate (Urethane)		51-79-6	6.13	25.2	59.9		211		N/A		Annual		Annual	BACT
Ethyl chloride (Chloroethane)		75-00-3	1,776,876	7,300,000	17,380,952		61,258,741		10,000		Annual		N/A	
Ethyl cyanoacrylate		7085-85-0	0.0550	0.214	0.431		1.66		24.6		24 Hr		N/A	
Ethylene chlorhydrin		107-07-3	0.246	0.783	1.51		4.04		329		1Hr		N/A	
Ethylenediamine		107-15-3	1.32	5.13	10.3		39.9		590		24 Hr		N/A	
Ethylene dibromide (EDB; 1,2-Dibromoethane)		106-93-4	8.08	33.2	79.0		278		N/A		Annual		Annual	BACT
Ethylene dichloride (EDC; 1,2-Dichloroethane)		107-06-2	2.17	8.45	17.0		65.6		971		24 Hr		N/A	
Ethylene glycol monobutyl ether (2-Butoxyethanol; EGEE; butyl cellosolve)		111-76-2	2,309,939	9,490,000	22,595,238		79,636,364		13,000		Annual		Annual	BACT
			5.19	20.2	40.7		157		2,320		24 Hr		N/A	

Ethylene glycol monoethyl ether (2-Ethoxyethanol; EGEE; cellosolve)	110-80-5	35,538	146,000	347,619	7.76	29.9	442	200	Annual	N/A
Ethylene glycol acetate (2-Ethoxyethyl acetate; EGEEA; Cellosolve Acetate)	111-15-9	1,45	5,64	11.4	43.8	649	24 Hr	24 Hr	N/A	N/A
Ethylene glycol vapor and aerosol	107-21-1	7,47	23.8	45.7	123	10,000	1Hr	1Hr	N/A	N/A
Ethylene oxide	75-21-8	20,2	83.0	198	696	N/A	Annual	Annual	LAER	
Ethylene thiourea	96-45-7	137	562	1,337	4,712	N/A	Annual	Annual	BACT	
Ethylenimine (Aziridine)	151-56-4	0.0470	0.184	0.371	1.43	21.1	24 Hr	24 Hr	N/A	N/A
Ethyldene dichloride (1,1-Dichloroethane)	75-34-3	21.7	84.5	170	656	9,715	24 Hr	24 Hr	N/A	N/A
Ethyldene norbornene	16219-75-3	1.84	5.85	11.2	30.2	2,458	1Hr	1Hr	N/A	
N-Ethylmorpholine	100-74-3	1.27	4.92	9.92	38.2	565	24 Hr	24 Hr	N/A	N/A
Ethyl silicate	78-10-4	4.58	17.8	35.9	138	2,045	24 Hr	24 Hr	N/A	N/A
Fenamiphos	22224-92-6	0.00500	0.0210	0.0420	0.162	2,40	24 Hr	24 Hr	N/A	N/A
Flour Dust (inhalable fraction)		0.0270	0.104	0.211	0.811	12.0	24 Hr	24 Hr	N/A	N/A
Fluorides, (inorganics), as F		0.134	0.522	1.05	4.05	60.0	24 Hr	24 Hr	N/A	N/A
Fluorine	7782-41-4	0.0830	0.324	0.654	2.52	37.3	24 Hr	24 Hr	N/A	N/A
Formaldehyde	50-00-0	137	562	1,337	4,712	N/A	Annual	Annual	BACT	
Formamide	75-12-7	0.990	3.84	7.76	29.9	442	24 Hr	24 Hr	N/A	N/A
Formic acid	64-18-6	0.506	1.96	3.96	15.3	226	24 Hr	24 Hr	N/A	N/A
Furan	110-00-9	2.43	10.0	23.8	83.9	N/A	Annual	Annual	BACT	
Furfural	98-01-1	0.422	1.64	3.31	12.7	189	24 Hr	24 Hr	N/A	N/A
Furfuryl alcohol	98-00-0	2.16	8.37	16.9	65.1	963	24 Hr	24 Hr	N/A	N/A
Germanium tetrabhydride	7782-65-2	0.0340	0.131	0.264	1.02	15.0	24 Hr	24 Hr	N/A	N/A
Glasswool, respirable size		2.43	10.0	23.8	83.9	N/A	Annual	Annual	BACT	
Glutaraldehyde	111-30-8	0.0150	0.0490	0.0940	0.251	20.5	1Hr	1Hr	N/A	N/A
Glycidol	556-52-5	0.325	1.26	2.55	9.83	145	24 Hr	24 Hr	N/A	N/A
Graphite (all forms except graphite fiber)	7782-42-5	0.107	0.417	0.842	3.24	48.0	24 Hr	24 Hr	N/A	N/A
Halothane	151-67-7	21.7	84.2	170	655	9,688	24 Hr	24 Hr	N/A	N/A
Hexachlorobenzene (HCB)	118-74-1	0.000100	0.000400	0.00100	0.00300	0.0480	24 Hr	24 Hr	N/A	N/A
Hexachloroethane	67-72-1	0.520	2.02	4.08	15.7	232	24 Hr	24 Hr	BACT	
Hexachloronaphthalene	1335-87-1	0.0110	0.0420	0.0840	0.324	4.80	24 Hr	24 Hr	N/A	N/A
Hexamethyl phosphoramide	680-31-9	2.43	10.0	23.8	83.9	N/A	Annual	Annual	BACT	
Hexamethylene-1,6-diisocyanate (HDI)	822-06-0	1.78	7.30	17.4	61.3	0.0100	24 Hr	24 Hr	N/A	N/A
n-Hexane	110-54-3	35,538	146,000	347,619	1,225,175	200	Annual	Annual	N/A	N/A
1,6-Hexamidine	124-09-4	0.128	0.496	1.00	3.85	57.0	24 Hr	24 Hr	N/A	N/A
1-Hexene	592-41-6	5.55	21.6	43.5	167	2,478	24 Hr	24 Hr	N/A	N/A
Hexone (Methyl isobutyl ketone; MIBK)	108-10-1	11.0	42.7	86.2	332	4,916	24 Hr	24 Hr	N/A	N/A
sec-Hexyl acetate	108-84-9	15.8	61.5	124	478	7,078	24 Hr	24 Hr	N/A	N/A
Hexylene glycol	107-41-5	9.02	28.7	55.2	148	12,083	1Hr	1Hr	N/A	N/A
Hydrazine and hydrazine sulfate	302-01-2	0.363	1.49	3.55	12.5	N/A	Annual	Annual	BACT	

		0.00100	0.00300	0.00600	0.0210	0.315	24 Hr	N/A
Hydrochloric acid (Hydrogen chloride; Muriatic acid)	7647-01-0	0.557	1.77	3.41	9.15	746	1Hr	N/A
Hydrogenated terphenyls	61788-32-7	3.554	14,600	34,762	122,517	20.0	Annual	N/A
Hydrogen bromide	10035-10-6	0.265	1.03	2.08	7.99	118	24 Hr	N/A
Hydrogen chloride (Hydrochloric acid; Muriatic acid)	7647-01-0	0.741	2.36	4.54	12.2	993	1Hr	N/A
Hydrogen cyanide	7647-01-0	3.554	14,600	34,762	122,517	20.0	Annual	N/A
Hydrogen fluoride (Hydrofluoric acid)	74-90-8	0.388	1.24	2.38	6.38	520	1Hr	N/A
Hydrogen peroxide	7664-39-3	0.183	0.584	1.12	3.01	246	1Hr	N/A
Hydrogen sulfide	7783-06-4	0.749	2.91	5.87	22.6	335	24 Hr	N/A
Hydroquinone	123-31-9	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
2-Hydroxypropyl acrylate	999-61-1	0.143	0.555	1.12	4.32	63.9	24 Hr	N/A
Indeno(1,2,3-cd)pyrene	193-39-5	16.2	66.4	158	557	N/A	Annual	BACT
Indium	7440-74-6	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Iodine	7553-56-2	0.0780	0.247	0.475	1.27	104	1Hr	N/A
Iodomethane (Methyl iodide)	74-88-4	0.624	2.42	4.89	18.8	279	24 Hr	N/A
Iron oxide dust and fume, as Fe	1309-37-1	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Iron salts, soluble, as Fe		0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Isobutyl alcohol	78-83-1	8.14	31.6	63.8	246	3,638	24 Hr	N/A
Isooctyl alcohol	26952-21-6	14.3	55.6	112	432	6,392	24 Hr	N/A
Isophorone	78-59-1	2.11	6.72	12.9	34.7	2,826	1Hr	N/A
Isophorone diisocyanate	4098-71-9	0.00200	0.00900	0.0190	0.0740	1.09	24 Hr	N/A
Isoprene	78-79-5	2.43	10.0	23.8	83.9	N/A	Annual	BACT
2-Isopropoxyethanol	109-59-1	5.72	22.2	44.8	173	2,556	24 Hr	N/A
Isopropylamine	75-31-0	0.649	2.52	5.09	19.6	290	24 Hr	N/A
Isopropylbenzene (Cumene)	98-82-8	13.2	51.3	103	399	5,899	24 Hr	N/A
Isopropyl glycidyl ether	4016-14-2	12.8	49.6	100	385	5,702	24 Hr	N/A
N-Isopropylaniline	768-52-5	0.594	2.31	4.66	17.9	265	24 Hr	N/A
Kaolin	1332-58-7	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
Kepone (Chlordecone)	143-50-0	0.386	1.59	3.78	13.3	N/A	Annual	BACT
Ketene	463-51-4	0.0460	0.179	0.362	1.39	20.6	24 Hr	N/A
Lead Acetate, as Pb	301-04-2	22.2	91.3	217	766	N/A	Annual	BACT
Lead Phosphate, as Pb	7446-27-7	148	608	1,448	5,105	N/A	Annual	BACT
Maleic anhydride	108-31-6	0.0220	0.0840	0.169	0.650	9.63	24 Hr	N/A
Manganese, elemental and inorganic compounds, as Mn	7439-96-5	0.0110	0.0420	0.0840	0.324	4.80	24 Hr	N/A
Mercury, as Hg, alkyl compounds	7439-97-6	0.00100	0.00200	0.00400	0.0160	0.240	24 Hr	N/A
Mercury, as Hg, aryl compounds	7439-97-6	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Mercury, as Hg, inorganic forms including metallic mercury	7439-97-6	53.3	219	521	1,838	0.300	Annual	N/A
Mesityl oxide	141-79-7	3.23	12.6	25.4	97.6	1,445	24 Hr	N/A
Methacrylic acid	79-41-4	3.78	14.7	29.7	114	1,690	24 Hr	N/A
2-Methoxyethanol (MethylCellosolve; EGME)	109-86-4	0.836	3.25	6.55	25.2	373	24 Hr	N/A

2-Methoxyethyl acetate (Methyl)Cellulosolve acetate; EGMEA)	110-49-6	1.30	5.04	10.2	39.2	580	24 Hr	N/A
4-Methoxyphenol	150-76-5	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Methyl acrylate	96-33-3	0.378	1.47	2.97	11.4	169	24 Hr	N/A
Methylacrylonitrile	126-98-7	0.147	0.573	1.16	4.45	65.9	24 Hr	N/A
Methylamine	74-89-5	0.341	1.33	2.67	10.3	152	24 Hr	N/A
Methyl n-amyl ketone	110-43-0	12.5	48.7	98.3	379	5,604	24 Hr	N/A
N-Methyl aniline	100-61-8	0.118	0.457	0.923	3.55	52.6	24 Hr	N/A
2-Methyl aziridine (Propylenimine; Propylene imine)	75-55-8	0.251	0.975	1.97	7.57	112	24 Hr	N/A
Methyl n-butyl ketone	591-78-6	1.10	4.27	8.62	33.2	492	24 Hr	N/A
Methyl Cellulosolve (2-Methoxyethanol; EGMEA)	109-86-4	0.836	3.25	6.55	25.2	373	24 Hr	N/A
Methyl Cellulosolve acetate (2-Methoxyethyl acetate; EGMEA)	110-49-6	1.30	5.04	10.2	39.2	580	24 Hr	N/A
Methyl chloride (Chloromethane)	74-87-3	5.55	21.5	43.5	167	2,478	24 Hr	N/A
5-Methyl chrysene	3697-24-3	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Methyl 2-cyanoacrylate	137-05-3	0.0490	0.190	0.383	1.47	21.8	24 Hr	N/A
Methylcyclohexanol	25639-42-3	12.5	48.7	98.3	379	5,604	24 Hr	N/A
o-Methylcyclohexanone	583-60-8	12.3	47.9	96.6	372	5,505	24 Hr	N/A
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	101-68-8	0.00300	0.0110	0.0220	0.0830	1.23	24 Hr	N/A
Methylene chloride (Dichloromethane)	75-09-2	9.33	36.2	73.1	282	4,168	24 Hr	N/A
Methylene bis(2-chloroaniline) (MOCA)	101-14-4	4.13	17.0	40.4	142	N/A	Annual	BACT
4,4'-Methylene bis(4-cyclohexylisocyanate)	5124-30-1	0.00300	0.0110	0.0230	0.0870	1.29	24 Hr	N/A
Methylene bis(4-methylenedianiline) (and dihydrodronchioride)	101-77-9	0.0440	0.169	0.341	1.31	19.5	24 Hr	N/A
Methyl ethyl ketone peroxide	1338-23-4	0.108	0.343	0.659	1.77	144	1Hr	N/A
Methyl formate	107-31-3	14.3	55.5	112	431	6,385	24 Hr	N/A
Methyl hydrazine	60-34-4	0.00100	0.00400	0.00800	0.0310	0.452	24 Hr	N/A
Methyl iodide (Iodomethane)	74-88-4	0.624	2.42	4.89	18.8	279	24 Hr	N/A
Methyl isoamyl ketone	110-12-3	12.5	48.7	98.3	379	5,605	24 Hr	N/A
Methyl isobutyl carbinol	108-11-2	5.61	21.8	44.0	169	2,507	24 Hr	N/A
Methyl isobutyl ketone (MIBK; Hexone)	108-10-1	11.0	42.7	86.2	332	4,916	24 Hr	N/A
Methyl isocyanate	624-83-9	0.00300	0.0100	0.0200	0.0760	1.12	24 Hr	N/A
Methyl methacrylate	80-62-6	124,381	511,000	1,216,667	4,288,112	700	Annual	N/A
alpha-Methyl styrene	98-83-9	13.0	50.4	102	392	4,914	24 Hr	N/A
Methyl tert-butyl ether (MTBE)	1634-04-4	7.75	30.1	60.7	234	3,462	24 Hr	N/A
Methyl vinyl ketone	78-94-4	0.0430	0.136	0.262	0.704	57.3	1Hr	N/A
MIBK (Methyl isobutyl ketone; Hexone)	108-10-1	11.0	42.7	86.2	332	4,916	24 Hr	N/A
Mirex	2385-85-5	0.348	1.43	3.41	12.0	N/A	Annual	BACT

Molybdenum, as Mo, metal and insoluble compounds	7439-98-7	0.537	2.09	4.21	16.2	240	24 Hr	N/A
Molybdenum, as Mo, soluble compounds	7439-98-7	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Monochlorobenzene (chlorobenzene)	108-90-7	2.47	9.61	19.4	74.7	1,105	24 Hr	N/A
Morpholine	110-91-8	3.83	14.9	30.0	116	1,710	24 Hr	N/A
MTBE (Methyl tert-butyl ether)	1634-04-4	533,063	2,190,000	5,214,286	18,377,622	3,000	Annual	N/A
Muriatic acid (Hydrogen chloride; Hydrochloric acid)	7647-01-0	3,554	14,600	34,762	122,517	20.0	Annual	N/A
Mustard gas	505-60-2	2.43	10.0	23.8	83.9	N/A	Annual	LAER
Naphthalene	91-20-3	2.82	10.9	22.1	85.0	1,258	24 Hr	N/A
2-Naphthylamine	91-59-8	2.43	10.0	23.8	83.9	N/A	Annual	LAER
Nickel and compounds, as Ni	7440-02-0	6.83	28.1	66.8	236	N/A	Annual	BACT
Nickel carbonyl, as Ni	13463-39-3	6.83	28.1	66.8	236	N/A	Annual	BACT
Nickel subsulfide, as Ni	12035-72-2	3.70	15.2	36.2	128	N/A	Annual	LAER
Nitric acid	7697-37-2	0.277	1.08	2.17	8.36	124	24 Hr	N/A
Nitrilocrylic acid	139-13-9	1,185	4,867	11,587	40,839	N/A	Annual	BACT
D-Nitroaniline	100-01-6	0.161	0.626	1.26	4.86	72.0	24 Hr	N/A
Nitrobenzene	98-95-3	0.270	1.05	2.12	8.17	121	24 Hr	N/A
D-Nitrochlorobenzene	100-00-5	0.0350	0.134	0.271	1.05	15.5	24 Hr	N/A
6-Nitrochrysene	7496-02-8	0.162	0.664	1.58	5.57	N/A	Annual	BACT
Nitroethane	79-24-3	16.5	64.1	129	498	7,369	24 Hr	N/A
Nitrofen	1836-75-5	77.3	317	756	2,663	N/A	Annual	BACT
Nitrogen mustards (2,2'-Dichloro-N-methyl-diethyldiamine)	51-75-2	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Nitromethane	75-52-5	2.68	10.4	21.0	81.0	1,198	24 Hr	N/A
1-Nitropropane	108-03-2	4.89	19.0	38.4	148	2,186	24 Hr	N/A
2-Nitropropane	79-46-9	2.43	10.0	23.8	83.9	N/A	Annual	BACT
1-Nitropyrene	5522-43-0	16.2	66.4	158	557	N/A	Annual	BACT
4-Nitropyrene	57835-92-4	16.2	66.4	158	557	N/A	Annual	BACT
N,N-Nitrosodi-t-butylamine	924-16-3	1.11	4.56	10.9	38.3	N/A	Annual	BACT
N,N-Nitrosodietanolamine	1116-54-7	2.22	9.13	21.7	76.6	N/A	Annual	BACT
N,N-Nitrosodiethylamine	55-18-5	0.0410	0.170	0.404	1.42	N/A	Annual	BACT
N,N-Nitrosodimethylamine	62-75-9	0.127	0.521	1.24	4.38	N/A	Annual	BACT
N,N-Nitrosodi-t-propylamine	621-64-7	0.888	3.65	8.69	30.6	N/A	Annual	BACT
N,N-Nitroso-N-ethylurea	759-73-9	0.231	0.948	2.26	7.96	N/A	Annual	BACT
4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	64091-91-4	2.43	10.0	23.8	83.9	N/A	Annual	BACT
N,N-Nitrosomethylurea	684-93-5	0.0520	0.215	0.511	1.80	N/A	Annual	BACT
N,N-Nitrosomethylvinylamine	4549-40-0	2.43	10.0	23.8	83.9	N/A	Annual	BACT
N,N-Nitrosomorpholine	59-89-2	0.935	3.84	9.15	32.2	N/A	Annual	BACT
N'-Nitrosonomicotine	16543-55-8	2.43	10.0	23.8	83.9	N/A	Annual	BACT
N,N-Nitrosopiperidine	100-75-4	0.658	10.0	6.44	22.7	N/A	Annual	BACT
N,N-Nitrosopyrrolidine	930-55-2	2.91	10.0	28.5	100	N/A	Annual	BACT
N,N-Nitrososarcosine	13256-22-9	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Nitrotoluene (mixtures and isomers)	88-72-2	0.603	2.34	4.72	18.2	269	24 Hr	N/A

Nitrous oxide	10024-97-2	4.84	18.8	37.9	146	2,160	24 Hr	N/A
Octachloronaphthalene	2234-13-1	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Oxalic acid	144-62-7	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
P,p'-Oxybis(benzenesulfonyl) hydrazide	80-51-3	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
4,4'-Oxydianiline (2,4-Diaminophenyl ether)	101-80-4	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Pentachloronaphthalene	1321-64-8	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Pentachloronitrobenzene (Quintobenzene; PCNB)	82-68-8	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Pentachlorophenol (PCP)	87-86-5	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Pentyl Acetate (mixtures and isomers)	628-63-7	14.3	55.6	112	432	6,390	24 Hr	N/A
Perchloroethylene (Tetrachloroethylene)	127-18-4	301	1,237	2,946	10,383	N/A	Annual	BACT
Perchloromethyl mercaptan	594-42-3	0.0410	0.159	0.320	1.23	18.2	24 Hr	N/A
Perfluoroisobutylene	382-21-8	0.00600	0.0190	0.0370	0.100	8.18	1Hr	N/A
Persulfates (Ammonium, Potassium, Sodium)	7727-54-0	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
PGME (Propylene glycol monomethyl ether)	107-98-2	355-375	1,460,000	3,476,190	12,251,748	2,000	Annual	N/A
Phenol	108-95-2	1.03	4.02	8.10	31.2	462	24 Hr	N/A
Phenolphthalein	77-09-8	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Phenylenediamine (mixtures and isomers)	106-50-3	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Phenyl ether vapor	101-84-8	0.374	1.45	2.93	11.3	167	24 Hr	N/A
Phenyl glycidyl ether (PGE)	122-60-1	0.0330	0.128	0.259	0.996	14.7	24 Hr	N/A
Phenyldiazine	100-63-0	0.0240	0.0920	0.186	0.717	10.6	24 Hr	N/A
Phenyl mercaptan	108-98-5	0.121	0.470	0.949	3.65	54.1	24 Hr	N/A
Phosgene	75-44-5	0.0220	0.0840	0.170	0.656	9.71	24 Hr	N/A
Phosphine	7803-51-2	0.0220	0.0870	0.176	0.677	10.0	24 Hr	N/A
Phosphoric acid	7664-38-2	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Phosphorus (yellow)	7723-14-0	1,777	7,300	17,381	61,259	10.0	Annual	N/A
Phosphorus oxychloride	10025-87-3	0.0340	0.131	0.264	0.164	2.43	24 Hr	N/A
Phosphorus pentachloride	10026-13-8	0.0460	0.178	0.359	1.02	15.1	24 Hr	N/A
Phosphorus pentasulfide	1314-80-3	0.0540	0.209	0.421	1.38	20.4	24 Hr	N/A
Phosphorus trichloride	7719-12-2	0.0600	0.234	0.473	1.82	27.0	24 Hr	N/A
Phthalic anhydride	85-44-9	0.325	1.26	2.55	9.82	145	24 Hr	N/A
Picric acid	88-89-1	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Platinum (metal)	7440-06-4	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Platinum, soluble salts, as Pt	7440-06-4	0.000100	0.000400	0.00100	0.00350	0.0480	24 Hr	N/A
Polybrominated biphenyls (PBBs; Bromodiphenyls)	59536-65-1	0.207	0.849	2.02	7.12	N/A	Annual	BACT
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	1336-36-3	0.0270	0.104	0.211	0.811	12.0	24 Hr	N/A
Potassium hydroxide	1310-58-3	0.149	0.476	0.914	2.45	200	1Hr	N/A
1,3-Propane sulfone	1120-71-4	2.58	10.6	25.2	88.8	N/A	Annual	BACT
Propargyl alcohol	107-19-7	0.123	0.479	0.965	3.72	55.0	24 Hr	N/A
Beta-Propiolactone	57-57-8	0.444	1.83	4.35	15.3	N/A	Annual	BACT
Propionic acid	79-09-4	1.63	6.32	12.8	2.39	35.4	24 Hr	N/A
Propylene dichloride (1,2-Dichloropropane)	78-87-5	711	2,920	6,952	24,503	4.00	Annual	N/A

		18.6	72.3	146	562	8,318	24 Hr	N/A
Propylene glycol monomethyl ether (PGME)	107-98-2	355,375	1,460,000	3,476,190	12,251,748	2,000	Annual	N/A
Propylene oxide	75-56-9	5,331 2.55 480	21,900 9.91 1,973	52,143 20.0 4,698	183,776 77.0 16,556	30.0 1,140 N/A	Annual 24 Hr Annual	N/A N/A BACT
Propylenimine (2-Methyl aziridine; Propylene imine)	75-55-8	0.251	0.975	1.97	7.57	112	24 Hr	N/A
Pyridine	110-86-1	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Pyrocatechol (Catechol)	120-80-9	1.21	2.99	6.04	23.2	344	24 Hr	N/A
Quinobenzene (Pentachloronitrobenzene)	82-68-8	0.0270	0.104	4.70	9.48	36.5	540	N/A
Resorcinol	108-46-3	2.42	9.40	19.0	73.0	1,081	24 Hr	N/A
Rhodium (metal) and insoluble compounds, as Rh	7440-16-6	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Rhodium, soluble compounds, as Rh	7440-16-6	0.0100	0.00200	0.00400	0.0160	0.240	24 Hr	N/A
Safrole	94-59-7	28.2	116	276	972	N/A	Annual	BACT
Selenium and compounds, as Se	7782-49-2	0.0110	0.0420	0.0840	0.324	4.80	24 Hr	N/A
Silica-Amorphous: Diatomaceous earth (uncalcined) (respirable size)	61790-53-2							
Silica-Amorphous: precipitated silica	11926-00-8							
Silica-Amorphous: silica gel	112926-00-8							
Silica-Amorphous: silica, fume (respirable size)	69012-64-2							
Silica-Amorphous: silica, fused (respirable size)	60676-86-0							
Silica-Crystalline: Cristobalite (respirable size)	14464-46-1							
Silica-Crystalline: Quartz (respirable size)	14808-60-7							
Silica-Crystalline: Tridymite (respirable size)	15468-32-3							
Silica-Crystalline: Tripoli, as contained respirable quartz (respirable size)	14808-60-7							
Silicon tetrahydride (Silane)	7803-62-5	0.353	1.37	2.77	10.7	158	24 Hr	N/A
Sodium Azide, as sodium azide or hydrazoic acid vapor	26628-22-8	0.0220	0.0700	0.134	0.359	29.3	1Hr	N/A
Sodium bisulfite	7631-90-5	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Sodium hydroxide	1310-73-2	0.149	0.476	0.914	2.45	200	1Hr	N/A
Sodium metabisulfite	7681-57-4	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Stoddard solvent (Mineral spirits)	8052-41-3	30.8	119	241	929	13,742	24 Hr	N/A
Strong inorganic acid mists containing sulfuric acid (>35% by weight)	7664-93-9	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Styrene, monomer	100-42-5	4.58	17.8	35.9	138	2,045	24 Hr	N/A
Sulfallate	95-06-7	32.9	135	322	1,134	1,000	Annual	N/A
Sulfometuron methyl	74222-97-2	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Sulfur monochloride	10025-67-9	0.412	1.31	2.53	6.78	552	1Hr	N/A
Sulfur tetrafluoride	7783-60-0	0.0330	0.105	0.202	0.542	44.2	1Hr	N/A
Sulfuric acid	7664-93-9	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Sulprofos	35400-43-2	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A
Talc, containing no asbestos fibers	14807-96-6	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
Tantalum, metal and oxide dusts, as Ta	7440-25-7	0.269	1.04	2.11	8.11	120	24 Hr	N/A
TCDD (2,3,7,8-Tetrachlorodibenzo-p-dioxin), as equivalents	1746-01-6	0.000100	0.000100	0.000100	0.000100	N/A	Annual	LAER

Tellurium and compounds, except hydrogen telluride, as Te	13494-80-9	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Terphenyls	26140-60-3	0.373	1.19	2.29	6.13	500	1Hr	N/A
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	1746-01-6	0.000100	0.000100	0.000100	N/A	Annual	LAER	
1,1,2,2-Tetrachloroethane	79-34-5	0.369	1.43	2.89	11.1	165	24 Hr	N/A
Tetrachloroethylene (Perchloroethylene)	127-18-4	9.11	35.4	71.4	275	4,069	24 Hr	N/A
Tetrachloronaphthalene	1335-88-2	0.107	0.417	2.946	10,383	N/A	Annual	BACT
1,1,2,2-Tetrafluoroethane	811-97-2	14,215,010	58,400,000	139,047,619	490,069,930	80,000	24 Hr	N/A
Tetrafluoroethylene	116-14-3	0.440	1.71	3.45	13.3	197	24 Hr	N/A
Tetrahydrofuran	109-99-9	31.7	123	248	956	14,155	24 Hr	N/A
Tetranitromethane	509-14-8	0.00200	0.00800	0.0170	0.0650	0.962	24 Hr	N/A
Thallium, elemental and soluble compounds, as Tl	7440-28-0	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Thioacetamide	62-55-5	1.05	4.29	10.2	36.0	N/A	Annual	BACT
Thionyl chloride	7719-09-7	0.363	1.16	2.23	5.97	487	1Hr	N/A
Thiourea	62-56-6	84.6	348	828	2,917	N/A	Annual	BACT
Tin organic compounds, as Sn	7440-31-5	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A
Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn	7440-31-5	0.107	0.417	0.842	3.24	48.0	24 Hr	N/A
o-Tolidine (3,3'-Dimethylbenzidine)	119-93-7	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Toluene (Toluol)	108-88-3	71,075	292,000	695,238	2,450,350	400	Annual	N/A
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)	584-84-9	0.00200	0.00700	0.0150	0.0580	0.855	24 Hr	N/A
Toluene-2,4-diamine (2,4-Diaminotoluene)	95-80-7	1.62	6.64	15.8	55.7	N/A	Annual	N/A
m- and p- Toluidine	108-44-1	0.471	1.83	3.69	14.2	210	24 Hr	N/A
o- Toluidine and o-toluidine hydrochloride and mixed isomers	95-53-4	34.8	143	341	1,201	N/A	Annual	BACT
Toluol (Toluene)	108-88-3	71,075	292,000	695,238	2,450,350	400	Annual	N/A
Tributyl phosphate	126-73-8	0.117	0.455	0.917	3.53	52.3	24 Hr	N/A
Trichloroacetic acid	76-03-9	0.359	1.39	2.81	10.8	160	24 Hr	N/A
1,2,4-Trichlorobenzene	120-82-1	2.77	8.82	17.0	45.5	3,711	1Hr	N/A
1,1,2-Trichloroethane	79-00-5	2.93	11.4	23.0	88.5	1,310	24 Hr	N/A
Trichloroethylene (Trichloroethene)	79-01-6	888	3,650	8,690	30,629	N/A	Annual	BACT
Trichloronaphthalene	1321-65-9	0.269	1.04	2.11	8.11	120	24 Hr	N/A
2,4,6 - Trichlorophenol	88-06-2	573	2,355	5,607	19,761	N/A	Annual	BACT
1,2,3-Trichloropropane	96-18-4	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Triethanolamine	102-71-6	0.269	1.04	2.11	8.11	1,447	24 Hr	N/A
Triethylamine	121-44-8	0.222	0.864	1.74	6.71	99.3	24 Hr	N/A
1,3,5-Triglycidyl-s-triazinetrione	2451-62-9	0.00300	0.0100	0.0210	0.0810	1.20	24 Hr	N/A

Trimellitic anhydride		552-30-7	0.00300	0.0100	0.0180	0.0490	4.00	1Hr	
Trimethylbenzene (mixtures and isomers)	25551-13-7	6.60	25.6	51.7	199	2,949	24 Hr	N/A	N/A
Trimethylamine	75-50-3	0.649	2.52	5.09	19.6	290	24 Hr	N/A	N/A
2,4,6-Trinitrotoluene (TNT)	118-96-7	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A	N/A
Tris(2-hydroxyethyl)phosphate	78-30-8	0.00500	0.0210	0.0420	0.162	2.40	24 Hr	N/A	N/A
Triphenyl phosphate	115-86-6	0.161	0.626	1.26	4.86	72.0	24 Hr	N/A	N/A
Tris(2,3-dibromopropyl)phosphate	126-72-7	2.69	11.1	26.3	92.8	N/A	Annual	BACT	
Tungsten, as W, metal and insoluble compounds	7440-33-7	0.269	1.04	2.11	8.11	120	24 Hr	N/A	N/A
Tungsten, as W, soluble compounds	7440-33-7	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A	N/A
Uranium (natural), soluble and insoluble compounds, as U	7440-61-1	0.0110	0.0420	0.0840	0.324	4.80	24 Hr	N/A	N/A
Urethane (Ethyl carbamate)	51-79-6	6.13	25.2	59.9	211	N/A	Annual	BACT	
n-Valeraldehyde	110-62-3	9.46	36.8	74.2	286	4,227	24 Hr	N/A	N/A
Vanadium pentoxide, as V2O5, respirable dust and fume	1314-62-1	0.00300	0.0100	0.0210	0.0810	1.20	24 Hr	N/A	N/A
Vinyl acetate	108-05-4	35.538	146.000	347.619	1,225.175	200	Annual	N/A	N/A
Vinyl bromide	593-60-2	0.117	0.456	0.921	3.55	52.5	24 Hr	N/A	N/A
Vinyl chloride	75-01-4	17,769	73,000	173,810	612,587	100	Annual	N/A	N/A
Vinyl cyclohexene dioxide (4-vinyl-1-cyclohexene diepoxyde)	202	830	1,975	6,961	N/A	Annual	LAER		
4-Vinyl cyclohexene	106-87-6	2.43	10.0	23.8	83.9	N/A	Annual	BACT	
Vinyl fluoride	100-40-3	0.0310	0.120	0.241	0.930	13.8	24 Hr	N/A	N/A
Vinyldiene chloride (1,1-Dichloroethylene)	75-02-5	0.0240	0.0920	0.186	0.717	10.6	24 Hr	N/A	N/A
Vinyl toluene	75-35-4	1.06	4.14	8.35	32.2	45.2	24 Hr	N/A	N/A
Wood dust (certain hardwoods such as beech and oak)	25013-15-4	13.0	50.4	102	392	5,800	24 Hr	N/A	N/A
Wood dust (soft wood)									
Xylene (mixtures and isomers) (Xylo; Dimethyl Benzene)	1330-20-7	23.3	90.6	183	704	10,421	24 Hr	N/A	N/A
m-Xylene-a,a'-diamine	1477-55-0	0.00700	0.0240	0.0460	0.123	10.0	1Hr	N/A	N/A
Xylylne (mixtures and isomers)	1300-73-8	0.133	0.517	1.04	4.02	59.5	24 Hr	N/A	N/A
Yttrium metal and compounds, as Y	7440-65-5	0.0540	0.209	0.421	1.62	24.0	24 Hr	N/A	N/A
Zeolites (Erdonite)	66733-21-9	2.43	10.0	23.8	83.9	N/A	Annual	LAER	
Zirconium and compounds, as Zr	7440-67-7	0.269	1.04	2.11	8.11	120	24 Hr	N/A	N/A

Table B
Emission Thresholds, Standards and Control Requirements for Manufacture, Treatment and Disposal of Pesticides, Rodenticides, Insecticides, Herbicides or Fungicides

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points¹ (per averaging time expressed as lbs/hr or lbs/yr)						Ambient Air Standard (per averaging time expressed as micrograms per cubic meter)	Averaging Time for Standard and Threshold	Control Requirement
		<25 ft	25 to <40 ft	40 to <75 ft	≥75 ft	(d)	(e)	(f)	(g)	(h)
Aldrin	309-00-2	0.013	0.052	0.105	0.405	6	24 Hr	N/A	N/A	BACT
Anitrole	61-82-5	6.58	10.0	64.4	227	N/A	Annual	4.8	24 Hr	N/A
Antimony hydride (Stibine)	7803-52-3	0.011	0.042	0.084	0.324	0.324	4.8	12.2	24 Hr	N/A
ANTU	86-88-4	0.027	0.107	0.215	0.828	0.828	7.2	7.2	24 Hr	N/A
Atrazine	0.016	0.063	0.126	0.486	1.11	8.11	120	24 Hr	24 Hr	N/A
Azinphos-methyl	1912-24-9	0.269	1.04	2.11	0.324	0.324	4.8	12	24 Hr	N/A
Baygon (Propoxur)	86-50-0	0.011	0.042	0.084	0.811	0.811	12	24 Hr	24 Hr	N/A
Benomyl	114-26-1	0.027	0.104	0.211	0.811	0.811	240	24 Hr	24 Hr	N/A
Bromacil	17804-35-2	0.537	2.09	4.21	16.2	16.2	240	24 Hr	24 Hr	N/A
Bromomethane (Methyl bromide)	314-40-9	0.537	2.09	4.21	16.2	16.2	240	24 Hr	24 Hr	N/A
Captafol	74-83-9	888	3,650	8,690	30,629	5	Annual	93.2	24 Hr	N/A
Captan	2425-06-1	0.209	0.81	1.64	6.3	6.3	24 Hr	2.4	24 Hr	N/A
Carbaryl	133-06-2	0.005	0.021	0.042	0.162	0.162	24 Hr	120	24 Hr	N/A
Carbofuran	63-25-2	0.269	1.04	2.11	8.11	8.11	120	24 Hr	24 Hr	N/A
Chlordane	1563-66-2	0.005	0.021	0.042	0.162	0.162	2.4	24 Hr	24 Hr	N/A
Chlorinated camphene (Toxaphene)	57-74-9	0.027	0.104	0.211	0.811	0.811	12	24 Hr	24 Hr	N/A
Chloro-1-nitropropane	8001-35-2	0.027	0.104	0.211	0.811	0.811	12	24 Hr	24 Hr	N/A
Chloropicrin (Trichloronitromethane)	600-25-9	0.543	2.11	4.25	16.4	243	24 Hr	24 Hr	24 Hr	N/A
Chlorpyrifos	76-06-2	0.036	0.14	0.283	1.09	16.1	24 Hr	24 Hr	24 Hr	N/A
Crufomate	2921-88-2	0.011	0.042	0.084	0.324	0.324	4.8	24 Hr	24 Hr	N/A
Cyhexatin	299-86-5	0.269	1.04	2.11	8.11	8.11	120	24 Hr	24 Hr	N/A
Demeton	13121-70-5	0.269	1.04	2.11	8.11	8.11	120	24 Hr	24 Hr	N/A
Diazinon	8065-48-3	0.006	0.022	0.044	0.171	0.171	2.54	24 Hr	24 Hr	N/A
1,3-Dichloropropene	333-41-5	0.005	0.021	0.042	0.162	0.162	2.4	24 Hr	24 Hr	N/A
2,2-Dichloropropionic acid	542-75-6	444	1,825	4,345	15,315	N/A	Annual	BACT	N/A	N/A
Dichlorvos	3,554	0.244	0.947	1.91	7.36	109	24 Hr	24 Hr	Annual	N/A
Dicrotophos	75-99-0	14,600	34,762	122,517	20	20	24 Hr	24 Hr	24 Hr	N/A
	62-73-7	88.8	365	869	3,063	0.5	Annual	N/A	21.6	N/A
	0.048	0.188	0.379	1.46	0.405	6	24 Hr	24 Hr	24 Hr	N/A
	141-66-2	0.013	0.052	0.105	0.405	0.405	6	24 Hr	24 Hr	N/A

Dieldrin		60-57-1	0.013	0.052	0.105	0.405	6	24 Hr	N/A
Dinitro-o-cresol (4,6-Dinitro-o-cresol)		534-52-1	0.011	0.042	0.084	0.324	4.8	24 Hr	N/A
Dioxathion		78-34-2	0.011	0.042	0.084	0.324	4.8	24 Hr	N/A
Diquat, respirable dust (various compounds) (Diquat dibromide)		2764-72-9	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Diquat, total dust (various compounds) (Diquat dibromide)		2764-72-9	0.027	0.104	0.211	0.811	12	24 Hr	N/A
Disulfoton		298-04-4	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Endosulfan		115-29-7	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Endrin		72-20-8	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
EPN		2104-64-5	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Ethion		563-12-2	0.021	0.083	0.168	0.649	9.6	24 Hr	N/A
Fensulfothion		115-90-2	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Fenthion		55-38-9	0.011	0.042	0.084	0.324	4.8	24 Hr	N/A
Fenofofos		944-22-9	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Heptachlor and heptachlor epoxide		76-44-8	0.003	0.01	0.021	0.081	1.2	24 Hr	N/A
Hexachlorobutadiene		87-68-3	0.011	0.045	0.09	0.346	5.12	24 Hr	N/A
Hexachloroclohexane and isomers (Lindane and isomers)		58-89-9	0.027	0.104	0.211	0.811	12	24 Hr	N/A
Hexachlorocyclopentadiene		77-47-4	0.006	0.023	0.047	0.181	2.68	24 Hr	N/A
Lindane and other hexachlorocyclohexane isomers		58-89-9	0.027	0.104	0.211	0.811	12	24 Hr	N/A
Methomyl		16752-77-5	0.134	0.522	1.05	4.05	60	24 Hr	N/A
Methyl bromide (Bromomethane)		74-83-9	0.209	0.81	1.64	6.3	93.2	Annual	N/A
Methyl demeton		8022-00-2	0.027	0.104	0.211	0.811	12	24 Hr	N/A
Methyl parathion		298-00-0	0.011	0.042	0.084	0.324	4.8	24 Hr	N/A
Metribuzin		21087-64-9	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Mevinphos (Phosdrin)		7786-34-7	0.005	0.019	0.038	0.146	2.16	24 Hr	N/A
Monocrotophos		6923-22-4	0.013	0.052	0.105	0.405	6	24 Hr	N/A
Naled		300-76-5	0.161	0.626	1.26	4.86	72	24 Hr	N/A
Paraquat (respirable sizes) (Paraquat chloride)		1910-42-5	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Parathion		56-38-2	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Phenothiazine		92-84-2	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Phorate		298-02-2	0.003	0.01	0.021	0.081	1.2	24 Hr	N/A
Pindone		83-26-1	0.005	0.021	0.042	0.162	2.4	24 Hr	N/A
Propoxur (Baygon)		114-26-1	0.027	0.104	0.211	0.811	12	24 Hr	N/A
Pyrethrum		8003-34-7	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Quinone		106-51-4	0.024	0.092	0.186	0.717	10.6	24 Hr	N/A
Rotenone (commercial)		83-79-4	0.269	1.04	2.11	8.11	120	24 Hr	N/A
Sodium Fluoroacetate		62-74-8	0.003	0.01	0.021	0.081	1.2	24 Hr	N/A
Stibine (Antimony hydride)		7803-52-3	0.027	0.107	0.215	0.828	12.2	24 Hr	N/A
Strychnine		57-24-9	0.008	0.031	0.063	0.243	3.6	24 Hr	N/A
Sulfotep (TEDP)		3689-24-5	0.011	0.042	0.084	0.324	4.8	24 Hr	N/A
Sulfuryl fluoride		2699-79-8	1.12	4.36	8.79	33.8	501	24 Hr	N/A
TEPP		107-49-3	0.003	0.01	0.021	0.081	1.2	24 Hr	N/A

	Thiram	Toxaphene (Chlorinated camphene)	Trichloronitromethane (Chloropicrin)	Warfarin
137-26-8	0.054	0.209	0.421	1.62
8001-35-2	5.55	22.8	54.3	N/A
0.027	0.104	0.211	0.811	12
76-06-2	0.036	0.14	0.283	1.09
81-81-2	0.005	0.021	0.042	16.1
				24 HR
				Annual
				24 HR
				N/A
				N/A
				N/A

Table C
Emission Thresholds and Control Requirements for Manufacture, Treatment and Disposal of Pharmaceuticals

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points ¹ (per averaging time expressed as lbs/hr or lbs/yr)						Ambient Air Standard (per averaging time expressed as micrograms per cubic meter)	Averaging Time for Standard and Threshold	Control Requirement			
		<25 ft	25 to 40 ft	40 to 75 ft	≥75 ft	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Adriamycin	23214-92-8	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
5-Azacitidine	320-67-2	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
Azathioprine	446-86-6	3.48	14.3	34.1	120	N/A	Annual	LAER					
Bis(chloroethyl) nitrosourea	154-93-8	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlornaphazine)	494-03-1	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
Bis(chloromethyl) ether (BCME) and technical grade	542-88-1	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
1,4-Butanediol dimethanesulfonate (Myleran; busulphane)	55-98-1	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
Chlorambucil	305-03-3	0.014	0.056	0.134	0.471	N/A	Annual	LAER					
Chlornaphazine (N,N-Bis (2-chloroethyl)-2-naphthylamine)	494-03-1	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
1-Chloroethyl-3-(4-methylcyclohexyl)-1-nitrosourea (MeCCNU)	13909-09-6	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	13010-47-4	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
Chlorotrotyl methyl ether (CMME)	107-30-2	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
Chlorozotocin	54749-90-5	0.026	0.106	0.252	0.888	N/A	Annual	BACT					
Cisplatin	15663-27-1	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
Cyclophosphamide	50-18-0	10.5	42.9	102	360	N/A	Annual	LAER					
Cyclosporin A (Cyclosporine, Ciclosporin)	59865-13-3	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
Dacarbazine	4342-03-4	0.127	0.521	1.24	4.38	N/A	Annual	BACT					
Diethylstilbestrol (DES)	56-53-1	0.018	0.073	0.174	0.613	N/A	Annual	LAER					
Estriadiol (Oestradiol)	50-28-2	0.162	0.664	1.58	5.57	N/A	Annual	BACT					
Estrogens, conjugated													
Estrogens, not conjugated: Estrone	53-16-7	2.43	10.0	23.8	83.9	N/A	Annual	LAER					
Estrogens, not conjugated: Ethynodiol dihydrogen phosphate	57-63-6	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
Ethylnodiol dihydrogen phosphate	62-50-0	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
Iron dextran complex	9004-66-4	2.43	10.0	23.8	83.9	N/A	Annual	BACT					
Melphalan	148-82-3	0.048	0.197	0.47	1.66	N/A	Annual	LAER					

Mestranol		72-33-3	2.43		10.0	23.8	83.9	N/A	Annual
Methoxsalen (8-Methoxysoralen)		298-81-7	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Methyl methanesulfonate		66-27-3	63.5	261	621	2,188	N/A	Annual	BACT
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)		70-25-7	0.74	3.04	7.24	25.5	N/A	Annual	BACT
Metronidazole		443-48-1	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Myleran (1,4-Butanediol dimethanesulphonate; busulfan)		55-98-1	2.43	10.0	23.8	83.9	N/A	Annual	LAER
o-Nitroanisole		91-23-6	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Ochratoxin A		303-47-9	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Oestradiol (Estradiol)		50-28-2	0.162	0.664	1.58	5.57	N/A	Annual	BACT
Phenacetin		62-44-2	2.820	11.587	27,589	97,236	N/A	Annual	BACT
Phenazopyridine and phenazopyridine hydrochloride		136-40-3	36.3	149	355	1,250	N/A	Annual	BACT
Phenoxybenzamine hydrochloride		63-92-3	2.31	9.48	22.6	79.6	N/A	Annual	BACT
Phenytoin and sodium salt of phenytoin		57-41-0	2.43	10.0	23.8	83.9	N/A	Annual	BACT
Procarbazine and procarbazine hydrochloride		366-70-1	0.444	1.83	4.35	15.3	N/A	Annual	BACT
Propylthiouracil		51-52-5	6.13	25.2	59.9	211	N/A	Annual	BACT
Streptozotocin		18883-66-4	0.057	0.235	0.561	1.98	N/A	Annual	BACT
Tanoxifen		10540-29-1	2.43	10.0	23.8	83.9	N/A	Annual	LAER
Thioepa (Tris(1-aziridinyl)phosphine sulfide)		52-24-4	0.523	2.15	5.11	18	N/A	Annual	LAER
Tris(1-aziridinyl)phosphine sulfide (Thioepa)		52-24-4	0.523	2.15	5.11	18	N/A	Annual	LAER

Note: The emission rates in columns (c) to (f) in Tables A-C should not be used if the source of the emission has a horizontal or obstructed discharge, or if terrain elevations that are more than 25% of the discharge height exist within 1000 feet of the stack.

For purposes of calculating emissions for comparison with the threshold values in columns (c), (d), (e) or (f) in the tables a source would:

- combine emissions for each contaminant for all stacks in each of the 4 stack categories,
- compare each group of emissions against the respective threshold found in columns (c), (d), (e) or (f) in the table
- if any group exceeds it's respective threshold in column (c), (d), (e) or (f), consider all emissions from the source in determining compliance with the applicable standard or control requirement.

NR 445.08 Compliance requirements. Any compliance demonstration made under this section shall be done while the source is operating under the conditions allowed by permit or order resulting in the greatest emissions of the hazardous air contaminant, or in absence of permit or order, by using the maximum theoretical emissions from the source.

(1) COMPLIANCE DEMONSTRATION FOR EMISSION STANDARDS AND CONTROL REQUIREMENTS. The owner or operator of a source shall demonstrate compliance with the emission standards and control requirements in s. NR 445.07 for any hazardous air contaminant by doing one or more of the following, as applicable:

(a) Limiting potential, non-exempt emissions of any hazardous air contaminant to less than the relevant thresholds in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07.

(b) Limiting potential, non-exempt emissions of any hazardous air contaminant which has a standard expressed as an ambient air concentration in Table A or B of s. NR 445.07 to a quantity or concentration or for a duration to less than the concentration allowed under column (g) of the table.

(c) Limiting potential, non-exempt emissions of any hazardous air contaminant with a control requirement in Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, to a quantity or concentration or for a duration as to not cause an ambient air concentration off the source property which results in an inhalation impact greater than 1 in 1,000,000. The inhalation impact is determined by the following equation:

$$(\text{inhalation impact concentration}_{\text{annual average}}) \times (\text{Unit Risk Factor}) < 1 \times 10^{-6}$$

where:

inhalation impact concentration is the annual average concentration of a contaminant in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Unit Risk Factor for the contaminant is expressed in reciprocal micrograms per cubic meter ($\mu\text{g}/\text{m}^{3,-1}$)

(c) Limiting the concentration of any hazardous air contaminant which has a standard expressed as an ambient air concentration in Table A or B of s. NR 445.07 in the stack to less than the concentration allowed under column (g) of the table.

(d) Limiting emissions of the hazardous air contaminant to either the LAER or BACT control requirement identified in column (i) of Table A, B or C of s. NR 445.07. The control requirements in s. NR 445.07(1)(c), (2)(b), (3) and (4) shall be first applied to the emissions unit at the facility which emits the greatest amount of the hazardous

air contaminant. If application of the control requirement to this emissions unit does not reduce facility emissions of the hazardous air contaminant to a level less than the rate listed in column (c), (d), (e) or (f) of Table A, B or C for the contaminant, the control requirement shall be applied to other emissions units at the facility which emit decreasingly smaller amounts of the contaminant until emissions from the facility are below the emission rate listed in column (c), (d), (e) or (f) of Table A, B or C for the contaminant or until the control requirement has been applied to all emissions units at the facility which emit at least 10% of the rate listed in column (c), (d), (e) or (f) of Table A, B or C for the contaminant. If application of the control requirement to these emissions units does not result in the reduction of at least 50% of the potential emissions of the contaminant from the facility, the department may require application of the control requirement on a reasonable array of smaller emissions units which emit the contaminant.

Note: The term "control requirement" is used to represent the applicable level of emission reduction required for the hazardous air contaminant under review, in other words LAER or BACT. These reduction options include lower emitting processes or practices, material substitution, or add-on controls, or any combination of the options.

(2) ALTERNATIVE METHODS OF COMPLIANCE. (a) The owner or operator of a source may use the following alternative method of complying with any control requirements in s. NR 445.07(1)(c), (2)(b) or (3) by demonstrating both of the following:

1. For any hazardous air contaminant with a control requirement in Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, limiting potential emissions of the contaminant from the facility, including those exempt under s. NR 445.07(5), to a quantity or concentration or for a duration as to not cause an ambient air concentration off the source property which results in a cumulative inhalation impact greater than 1 in 100,000. The cumulative inhalation impact is determined by the following equation:

$$\sum \text{ (individual inhalation impacts annual average)} \times (\text{Unit Risk Factor}) < 1 \times 10^{-5}$$

where:

individual impact is the annual average concentration of a contaminant in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Unit Risk Factor for the contaminant is expressed in reciprocal micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)⁻¹

2. For any hazardous air contaminant with a control requirement in Table A, B or C not having a unit risk factor established by either the EPA or the California air resources board, limiting potential emissions of the

contaminant from the facility, including those exempt under s. NR 445.07(5), to less than the relevant threshold in column (c), (d), (e) or (f) of Table A, B or C.

(b) The owner or operator of a source of emissions of respirable dust from activities related to the transportation, handling and storage of coal may rely on information resulting from department approved single source, sector or area specific ambient monitoring to demonstrate compliance with sub. (1)(b). The compliance demonstration shall include, but not be limited to the following:

1. Results of the ambient monitoring.
2. Practices and procedures to mitigate emissions of respirable dust.
3. Activity levels for transporting, handling and storing coal.
4. Recordkeeping sufficient to demonstrate that appropriate dust mitigation practices and procedures are

being followed for the corresponding activity level for the transportation, handling or storage of coal.

Note: Contact the Wisconsin Department of Natural Resources, Bureau of Air Management, 608-26x-xxxx for additional information regarding the approval process for ambient monitoring.

(3) ENFORCEABLE LIMITATIONS. Any limitation elected under this section shall be placed in a permit or general or special order.

(4) DETERMINATION OF HAZARDOUS AIR CONTAMINANT EMISSIONS AND CONCENTRATION. For the purpose of determining emissions and concentrations of hazardous air contaminants under this section the following sources of information may be used:

(a) The owner or operator of a source may rely on information on an approved material safety data sheet if the approved material safety data sheet lists a hazardous air contaminant listed in Table A, B or C of s. NR 445.07 and for any hazardous air contaminant with a standard expressed as an ambient air concentration in Table A, B or C constitutes 1% (10,000 parts per million) or more of the material or for any hazardous air contaminant with a standard expressed as a control requirement in Table A , B or C constitutes 0.1% (1,000 parts per million) or more of the material. If an approved material safety data sheet for a material does not list a hazardous air contaminant in Table A, B or C at or above the amounts listed in this paragraph, the material will be presumed not to result in emissions of a hazardous air contaminant unless a hazardous air contaminant is formed in processing the material.

(b) The owner or operator of a source may rely upon mass balance or other use, consumption and analytical methodologies for calculating potential or theoretical emissions. However, the department may require that a stack test be conducted to affirm the accuracy of emission estimations.

(c) The owner or operator of a source is not required to consider emissions resulting directly from naturally occurring constituents in windblown soil.

(d) The owner or operator of a source may rely on information generated by either the EPA screening or refined dispersion model to demonstrate either of the following:

1. Concentrations of a hazardous air contaminant will not exceed the ambient standard in column (g) of Table A or B of s. NR 445.07.

2. The source meets the provisions of sub. (1)(c) or (2)(a)1.

Note: Contact the Wisconsin Department of Natural Resources, Bureau of Air Management, 608-266-7718 for additional information regarding procedures and protocols associated with US EPA screening and air dispersion models.

(5) COMPLIANCE SCHEDULES. (a) Owners or operators of sources subject to an emission standard or control requirement in s. NR 445.07 and constructed or last modified on or after the effective date of this section... [revisor inserts date] shall demonstrate compliance upon startup.

(b) Owners or operators of sources constructed or last modified prior to the effective date of this section... [revisor inserts date] with potential, non-exempt emissions of a hazardous air contaminant less than the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 shall maintain records in accordance with s. NR 439.04(1) and (2) no later than 36 months after the effective date of this section... [revisor inserts date].

(c) Owners or operators of sources constructed or last modified prior to the effective date of this section... [revisor inserts date] with potential, non-exempt emissions of a hazardous air contaminant greater than the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C or subject to s. NR 445.07(4) shall:

1. Submit information adequate to describe how applicable control requirements in s. NR 445.07(1)(c), (2)(b), (3) or (4) or 445.09(3)(c) will be met no later than 18 months after the effective date of this section... [revisor inserts date] in accordance with procedure in sub. (1)(d).

2. Demonstrate compliance with applicable emission standards and control requirements no later than 36 months after the effective date of this section... [revisor inserts date].

3. Submit the required information and compliance demonstrations in accordance with sub. (6).

4. Any request to obtain a variance under s. NR 445.11 shall be submitted no later than 18 months after the effective date of this section... [revisor inserts date] in accordance with procedure in that section.

(6) COMPLIANCE CERTIFICATION PROCESS. The owner or operator of any source needing to demonstrate compliance in accordance with the schedule in sub. (5)(c) shall do all of the following:

(a) For sources subject to sub. (5)(c)1., the information required shall be submitted on the application forms required for an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

(b) For all other sources, all of the following information shall be submitted to the department:

1. The hazardous air contaminants listed in Table A, B or C of s. NR 445.07 the facility is capable of emitting above its applicable threshold value.

2. The applicable emission standard for each hazardous air contaminant identified under subd. 1.

3. The method used for determining compliance under sub. (1) or (2) for each of the hazardous air contaminant's applicable standards.

4. A description of the records that will be kept on site to verify continuous compliance for each hazardous air contaminant with its applicable standard.

5. A signed and dated statement by the responsible official stating that the information is accurate to the best of his or her knowledge and belief, and that all of the requirements of this subchapter have been met.

Note: Application forms for par. (a) may be obtained from, and submitted to, the regional offices and service center of the department or the Wisconsin Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707-7921, Attention: Operation Permits.

The address for submittal of information under par. (b) is: Wisconsin Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison, WI 53707-7921, Attention: NR 445 Compliance Certification.

(7) DEPARTMENT REVIEW. The department shall review information submitted to comply with sub. (5)(c)1. to determine whether to approve, conditionally approve or disapprove the source's method to meet applicable control requirements.

(8) COMPLIANCE EXTENSIONS. The department may, at the request of the owner or operator of a source, grant an extension of any applicable compliance deadline in sub. (5)(b) or (c)1. or 2. or s. NR 445.09(4)(a) for a period not to exceed 6 months.

(9) SUBSEQUENT REQUIREMENTS. (a) Notwithstanding the compliance deadline in sub. (5)(c)2., a source needing department approval under sub. (7) shall achieve final compliance with applicable control requirements by the later of:

1. Thirty six months after the effective date of this section... [revisor inserts date].

2. Eighteen months after the department's approval under sub. (7).

(b) The owner or operator of a source which achieved compliance with requirements in subch. II by installing emission control equipment may not be required to install additional control equipment to achieve compliance with this subchapter for a period of 10 years after the installation of the control equipment or the useful life of the control equipment as determined by the department, whichever is less. For the purposes of this paragraph, increasing stack height, other dilution measures or material reformulation may not be construed as installation of emission control equipment. Material reformulation which requires substantial capital expenditures for process equipment which was made with prior department approval and which results in a reduction of emissions of hazardous air contaminants which is sufficient to comply with the limitations of this chapter may be construed as installation of emission control equipment under this paragraph.

NR 445.09 Fuel, control and compliance requirements for compression ignition internal combustion engines combusting fuel oil. (1) APPLICABILITY. This section applies to any compression ignition internal combustion engine which is capable of combusting fuel oil, except as follows:

- (a) An engine with rated brake power less than 100 horsepower.
- (b) An engine used to provide an essential service.
- (c) An engine used to power an emergency electric generator exempt under s. NR 406.04(1)(w) or 407.03(1)(u).

(2) FUEL REQUIREMENTS. Beginning 6 months after the effective date of this section... [revisor inserts date] the owner or operator of a compression ignition internal combustion engine shall only combust fuel oil designated for on-road use when firing the engine with fuel oil.

(3) CONTROL REQUIREMENTS. (a) The owner or operator of a compression ignition internal combustion engine or aggregation of engines which remain or will remain at a source for either 12 or more consecutive months, or for the full annual operating period at a seasonal source, and which for that period of time, combusts or intends to combust, in the aggregate, a total of 40,000 gallons or more of fuel oil, shall limit particulate emissions in accordance with one of the following:

1. For an engine installed at a source prior to the effective date of this section... [revisor inserts date], install, operate and maintain a control device which is certified by either the California air resources board or the

United States environmental protection agency to reduce particulate emissions to no more than the limit in subd. 1.a. or b., as applicable, unless an alternative or equivalent control method is approved by the department.

a. Engines rated from 100 to 750 horsepower: 0.10 grams per brake horsepower-hour.

b. Engines rated at greater than 750 horsepower: 0.03 grams per brake horsepower-hour.

2. For an engine installed or last modified on or after the effective date of this section... [revisor inserts date], control particulate emissions to a level which is the best available control technology.

(b) Where a compression ignition internal combustion engine capable of combusting fuel oil replaces an existing engine and performs the same or similar functions as the existing engine, the replacement will not be considered an interruption for purposes of determining under par. (a) how many months the existing engine remained, or will remain at the source or how many gallons of fuel oil the existing engine combusted or could combust in a 12 consecutive month period or for the full annual operating period at a seasonal source.

(c) The owner or operator of a facility which conducts any testing involving the operation of an engine or engines subject to this section where the engine or engines combust, in the aggregate, 40,000 gallons or more of fuel oil in any 12 consecutive month period shall control particulate emissions from the facility from the engine or engines subject to this section to a level which is the best available control technology.

(4) COMPLIANCE REQUIREMENTS. (a) The owner or operator of an engine subject to sub. (3)(a)1. shall certify compliance with this section no later than 36 months after the effective date of this section... [revisor inserts date] by providing all of the following information:

1. The rated horsepower of the engine.

2. The manufacturer name of the control device.

3. The product or model name of the control device.

4. The manufacturer's performance warranty for the control device expressed as an emission rate in grams per brake horsepower-hour.

5. The test method used to by the manufacturer to determine the emission rate in the manufacturer's performance warranty for the control device.

6. The certifying agency for the control device.

7. The date the control device was first put into operation.

(b) The owner or operator of an engine subject to sub. (3)(a)2. or a facility constructed or last modified on or after the effective date of this section... [revisor inserts date] subject to sub. (3)(c) shall submit information describing how best available control technology requirement will be met in a permit application in accordance with s. NR 406.03. Compliance with this section shall be demonstrated in accordance with the condition of the permit.

(c) The owner or operator of a facility constructed or last modified before the effective date of this section... [revisor inserts date] subject to sub. (3)(c) shall do both of the following:

1. Meet the schedule in s. NR 445.08(5)(c)1. and 2.
2. Submit the information on the application forms required for an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

(d) Any submission made under this subsection shall be signed by the responsible official designated by the owner or operator of source for this purpose, with a dated statement that the information submitted is accurate to the best of the responsible official's knowledge and belief and that all of the requirements of this section have been met.

Note: The address for submission of information to under par. (a) is: Wisconsin Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707, Attention: Compression Ignition Engine Certification.

Application forms for par. (b) may be obtained from, and submitted to: Wisconsin Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707, Attention: Construction Permit.

Application forms for par. (c) may be obtained from, and submitted to, the regional offices and service centers of the department or the Wisconsin Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707-7921, Attention: Operation Permits.

NR 445.10 Compliance requirements for sources of incidental emissions. (1) The owner or operator of a facility described by a standard industrial classification code listed in Table D, as described in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05(1), or which has actual annual emissions of less than 5 tons of particulate matter and less than 3 tons of volatile organic compounds shall meet the requirements of subs. (2) to (4) if any of the following apply:

- (a) The facility includes operation of one or more of the following processes:
1. A compression ignition internal combustion engine or engines with rated brake power greater than 100 horsepower used as a power source.
 2. Any expected source of chlorinated dioxins, furans or PCBs.
 3. Sludge incineration.

4. Chrome electroplating.
 5. Gasoline dispensing.
 6. Manufacture, treatment or disposal of a pesticide, rodenticide, insecticide, herbicide or a fungicide resulting in an emission to the atmosphere.
 7. Manufacture, treatment or disposal of a pharmaceutical resulting in an emission to the atmosphere.
 8. Solid, hazardous or medical waste incineration.
- (b) The presence of one or more of the chemicals in Table E at the facility is indicated by one of the following:
1. The chemical is listed on an approved material safety data sheet or is otherwise brought into the facility.
 2. The chemical is reasonably expected to be created at the facility through a combustion process or manufacturing process, or through the treatment or disposal of raw materials or waste.

(2)(a) The owner or operator of a process identified under sub. (1)(a)1. shall meet the applicable requirements in s. NR 445.09 for that process.

(b) The owner or operator of a process identified under sub. (1)(a)2. to 5. shall meet the applicable requirements in s. NR 445.07(1) for any hazardous air contaminants listed in Table A of s. NR 445.07 for that process.

Note: The department will develop a list of the hazardous air contaminants it has determined to be potentially emitted from the processes listed in sub. (1)(a)2. to 5. This list may be obtained by calling the Bureau of Air Management at 608-xxx-xxxx.

(c) The owner or operator of a process identified under sub. (1)(a)6. shall meet the applicable requirements in s. NR 445.07(2) for any hazardous air contaminants listed in Table B of s. NR 445.07 for that process.

(d) The owner or operator of a process identified under sub. (1)(a)7. shall meet the applicable requirements in s. NR 445.07(3) for any hazardous air contaminants listed in Table C of s. NR 445.07 for that process.

(e) The owner or operator of a process identified under sub. (1)(a)8. shall meet the applicable requirements in s. NR 445.07(4) for that process.

(3) The owner or operator of a facility meeting the criteria in sub. (1)(b) shall meet the applicable requirements in s. NR 445.07(1) for the chemical listed in Table A of s. NR 445.07.

(4) The owner or operator subject to sub. (2) or (3) shall do both of the following:

- (a) Demonstrate compliance using the procedures allowed under s. NR 445.08(1), (2)(a) or 445.09(4).
- (b) Meet the applicable compliance schedule under s. NR 445.08(5).

Note: Owners and operators of sources of incidental emissions of hazardous air contaminants should refer to chs. NR 406, 407 and 438 to determine whether there are applicable requirements in those chapters for contaminants identified under this section.

Table D
Standard Industrial Classifications for Sources of Incidental Emissions of Hazardous Air Contaminants

2-Digit SIC Code or Range	SIC Title
01-09	Agriculture, Forestry and Fishing
15	General Building Contractors
17	Special Trade Contractors
40-45, 47	Transportation
48	Communications
50-51	Wholesale Trade, except the following: Coal and Other Minerals and Ores (5052); Scrap and Waste Materials (5093); Chemicals and Allied Products (516); Petroleum and Petroleum Products (517)
52-59	Retail Trade
60-69	Finance, Insurance and Real Estate
70-89	Services, except the following: Laundry, Cleaning and Garment Services (721) ; Business Services, not elsewhere classified (7389); Automotive Repair Shops (753); Miscellaneous Repair Shops (769); General Medical and Surgical Hospitals (8062); Colleges, Universities and Professional Schools (822); Research, Development and Testing Services (873)

Table E
Chemicals Of Concern for Sources of Incidental Emissions of Hazardous Air Contaminants

Chemical Name	CAS Number	Chemical Name	CAS Number
Acetaldehyde	75-07-0	Hydrogen peroxide	7722-84-1
Acrolein	107-02-8	Hydrogen sulfide	7783-06-4
Acrylamide	79-06-1	Indium	7440-74-6
Acrylic acid	79-10-7	Iodine	7553-56-2
Acrylonitrile	107-13-1	Isophorone diisocyanate	4098-71-9
Ammonia	7664-41-7	Lead (all forms)	7439-92-1
Arsenic	7440-38-2	Maleic anhydride	108-31-6
Arsine	7784-42-1	Manganese compounds	7439-96-5
BCME (Bis chloromethyl ether)	542-88-1	Mercury	7439-97-6
Benzene	71-43-2	Methyl hydrazine	60-34-4
Benzo(a)pyrene	50-32-8	Methyl isocyanate	624-84-9
Beryllium	7440-41-7	Methylene bisphenyl diisocyanate	101-68-8
Bromine	7726-95-6	Nickel and compounds	7440-02-0
Bromine pentafluoride	7789-30-2	Octachloronaphthalene	2234-13-1
Butadiene, 1,3-	106-99-0	Oxalic acid	144-62-7
Cadmium	7440-43-9	Perchloroethylene (Tetrachloroethylene)	127-18-4
Carbon tetrachloride	56-23-5	Pentachloronaphthalene	1321-64-8
Chlorine	7782-50-5	Pentachlorophenol	87-86-5
Chlorine dioxide	10049-04-4	Phenylenediamine (mixtures and isomers)	106-50-3
Chlorine trifluoride	7790-91-2	Phosphine	7803-51-2
Chloroform	67-66-3	Phosphoric acid	7664-38-2
Chloromethyl methyl ether (CMME)	107-30-2	Phosphorus (yellow)	7723-14-0
Cobalt, metal dust	7440-48-4	Phosphorus pentachloride	10026-13-8
Diborane	19287-45-7	Platinum, soluble salts	7440-06-4
Dichloromethane (Methylene chloride)	74-09-2	Propylene dichloride (1,2-Dichloropropane)	78-87-5
Dichloropropene, 1,3-	542-75-6	Rhodium, soluble salts	7440-16-6
Diglycidyl ether	2238-07-5	Selenium compounds	7782-49-2
Ethylene dibromide	106-93-4	Sulfuric acid	7664-93-9
Ethylene dichloride	107-06-2	Tellurium and compounds	13494-80-9
Ethylene oxide	75-21-8	Tetrafluoroethylene	116-14-3
Fluorine	7782-41-4	Thallium (soluble compounds)	7440-28-0
Formaldehyde	50-00-0	Tin, organic compounds	7440-31-5
Hexachlorobenzene	118-74-1	Toluene 2,4- & 2,6 diisocyanate mixtures	584-84-9
Hexamethylene diisocyanate, 1,6- (HDI)	822-06-0	Trichloroethylene (Trichloroethene)	79-01-6
Hydrazine	302-01-2	Trimellitic anhydride	552-30-7
Hydrochloric acid (Hydrogen chloride)	7647-01-0	Triorthocresyl phosphate	78-30-8
Hydrogen bromide	10035-10-6	Tungsten, soluble compounds	7440-33-7
Hydrogen cyanide	74-90-8	Vinyl chloride	75-01-4
Hydrogen fluoride	7664-39-3	Xylene-a,a'-diamine, m-	1477-55-0

NR 445.11 Variances. (1) CRITERIA FOR APPROVAL. The owner or operator of a source subject to this chapter may apply for and the department may approve a variance from any of the provisions identified in pars. (a) and (b) if the applicant demonstrates to the satisfaction of the department that applicable provisions are met as follows:

- (a) An applicant for a variance from the LAER control requirements in s. NR 445.07(1)(c), (2)(b), (3) or (4) shall demonstrate all of the following to the satisfaction of the department:
1. Compliance with the LAER control requirements of s. NR 445.07(1)(c), (2)(b), (3) or (4) would be economically infeasible.
 2. Residual emissions of the hazardous air contaminant in question would not cause significant harm to the environment or public health.
 3. The source's emissions would be controlled to a level which is the best available control technology.

Note: Owners or operators of an iron foundry interested in using an environmental management system for recordkeeping, reporting and testing under this paragraph should refer to s. NR 439.045 for further information.

- (b) An applicant for a variance from the emission limitation of s. NR 445.07(1)(a) for a contaminant having an ambient air standard based on an annual averaging time, or for respirable coal dust, shall demonstrate all of the following to the satisfaction of the department:
1. All direct or portable sources owned or operated in the state by the owner or operator of the air contaminant source for which a variance is requested are in, or are on a schedule for, compliance with all other applicable requirements of chs. NR 400 to 499.
 2. The emission limitation from which variance is sought is technologically or economically infeasible to meet due to conditions or special circumstances at the source, including adverse environmental or energy impacts.
 3. Residual emissions of the hazardous air contaminant in question under the emission limitations proposed for inclusion in the variance would not cause significant harm to public health.

4. Good faith efforts have been made to comply with s. NR 445.07(1)(a) and all reasonably available alternative operating procedures and interim control measures to minimize emissions of the hazardous air contaminant will be utilized during the duration of the variance.

(2) CONSULTATION. The department shall consult with the department of health and family services to determine that residual emissions would not cause significant harm under sub. (1)(a)2. or (b)3. prior to establishing an emission limitation in a permit or order under this section.

(3) APPLICATION FORMS. Application for a variance under this section shall be submitted on the application forms required for a construction permit, an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

Note: Application forms for sub. (3) may be obtained from, and submitted to, the regional and area offices of the department or the Wisconsin Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707-7921, Attention: NR 445 Variance Applications.

(4) NOTICE AND HEARING. The department shall publish a notice of, and hold a public hearing on, any preliminary determination to approve a variance request under this section.

(5) ACTION ON APPLICATIONS. The department shall grant, conditionally grant or deny a variance request within 90 business days after the close of the public comment period on the request.

(6) REVIEW AND REVISION. The department shall review any variance granted under this section on a 5 year basis. Following its review and after notice and an opportunity for a public hearing and public comment, the department may modify, extend or rescind the variance.

NR 445.12 Review of hazardous air contaminant requirements.

(1) PERIODIC REPORTS. (a) Beginning 3 years after the effective date of this section... [revisor inserts date] and no later than every 3 years thereafter, the department, in consultation with the department of health and family services, shall prepare a report for the natural resources board that reviews information related to the listing, de-listing, and setting regulatory thresholds, standards and control requirements for hazardous air contaminants under this chapter.

(b) Beginning 6 years after the effective date of this section... [revisor inserts date] and no later than every 6 years thereafter, the department, in consultation with the department of health and family services, shall prepare a report for the natural resources board that includes all of the following:

1. A review of available information about the likely sources of emissions of and an assessment of whether the criteria set forth in sub. (2)(b) are likely to apply to the hazardous air contaminants identified under par. (a).
2. Recommendations on the need for rule modifications.
3. Recommendations on the need for special studies.

(2) REVISION OF TABLE LISTS. (a) The department shall determine that a substance is a hazardous air contaminant that may be listed in Table A, B or C of s. NR 445.07 if the substance can, due to inhalation, cause an adverse health effect and it meets one or more of the following conditions:

1. The substance is classified as a known carcinogen or reasonable anticipated to carcinogenic by both the international agency for research on cancer and the national toxicology program.
2. The substance has a threshold limit value established by the American conference of governmental industrial hygienists.
3. The substance has a reference concentration established by the United States environmental protection agency with an uncertainty factor of 300 or less.

(b) The department shall list in Table A, B or C of s. NR 445.07 a substance determined under par. (a) to be a hazardous air contaminant if it also determines that none of the following apply to the contaminant:

1. The only critical inhalation effect listed for the substance by the American conference of governmental industrial hygienists is asphyxiation.
2. The substance possesses an explosive nature requiring safety procedures that preclude ambient concentrations that would present toxicity concerns.
3. The substance has a threshold limit value of greater than or equal to 100 parts per million.
4. The substance has a threshold limit value of greater than or equal to 10 milligrams per cubic meter.

(c) The department may consider any of the following in determining whether to list a hazardous air contaminant in Table A, B or C of s. NR 445.07:

1. Other regulations that may provide adequate protection for public health or welfare.
2. That additional information is necessary to fully assess the need to list the hazardous air contaminant in Table A, B or C.

(3) REEVALUATION OF LISTING DECISION. The owner or operator of an affected source or other interested party may submit a written request to, and the department may, reevaluate a determination to list or not to list a substance as a hazardous air contaminant in this chapter. The request shall provide new or additional information for the department's consideration. In conducting a reevaluation, the department shall consider the criteria set forth in sub. (2)(b) and (c) and other information that it deems relevant.

NR 445.13 Hazardous air contaminant studies. (1) The department may conduct studies of individual substances or categories or sources of substances if it determines that unique complexities may warrant alternative approaches to those listed in this chapter, or if the department otherwise needs additional information to determine whether to list the contaminant in Table A, B or C of s. NR 445.07.

Note: Unique complexities may be the result of the nature of the emissions, the sources of emissions, the management of emissions or other factors. The studies will not include a re-evaluation of the classification of the substance as reported by the American Conference of Government Industrial Hygienists, the United States Environmental Protection Agency, the International Agency for Research on Cancer, or the National Toxicology Program.

(2) The department staff shall, in consultation with affected industry, public health officials and other interested parties, undertake 2 separate studies of the emissions of amorphous and crystalline silica and wood dust. The studies shall evaluate the sources and amounts of emissions and alternative strategies for minimizing public health risks. The department staff shall report progress on the studies to the natural resources board by 24 months after the effective date of this section... [revisor inserts date].

SECTION 73. NR 445.14(2) and (3) are created to read:

NR 445.14(2) In the event that emissions of a hazardous air contaminant from a facility are determined to be in nonconformance with the applicable emission requirement for that contaminant and the owner or operator of the source has exercised due diligence and complied with the procedures for identifying and quantifying hazardous air contaminants, and with the other provisions in this subchapter, the source will not be deemed to be out of compliance with respect to that hazardous air contaminant if by the later of the deadlines in s. NR 445.08(5) or 90 days after the determination, the source meets the emission requirement applicable to that hazardous air contaminant. The department may, in writing, extend the deadline for achieving compliance.

Note: Examples of procedures in this subchapter include stack thresholds, risk-based modeling and applicability criteria for sources of incidental emissions.

(3) The department shall monitor sources of emissions of the contaminants listed in s. NR 410.04(2)(b)5. If the department determines that emissions monitored under this subsection are of such quantity, concentration or duration that they exceed 2.4% of their threshold limit value-time weighted average established by the American conference of governmental industrial hygienists, in the threshold limit values and biological exposure indices for 2000 incorporated by reference in s. NR 484.11(2)(c), it may establish a limitation in a permit or order that will

ensure the source does not cause concentrations off of the source's property which exceed 2.4% of the threshold limit value-time weighted for any consecutive 24-hour averaging period.

SECTION 74. NR 446.02 (intro.) is amended to read:

NR 446.02 Definitions. (intro.) The definitions contained in ehs. ch. NR 400 and 445 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 75. NR 447.02 (intro.) is amended to read:

NR 447.02 Definitions. (intro.) The definitions contained in ehs. ch. NR 400 and 445 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 76. NR 448.02 (intro.) is amended to read:

NR 448.02 Definitions. (intro.) The definitions contained in ehs. ch. NR 400 and 445 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 77. NR 448.02(1) is renumbered NR 448.02(1m)

SECTION 78. NR 448.02(1) is created to read:

NR 448.02(1) "Beryllium" means the element beryllium. Where weights or concentrations are specified, the weights or concentrations apply to beryllium only, excluding the weight or concentration of any associated elements.

SECTION 79. NR 449.02 (intro.) is amended to read:

NR 449.02 Definitions. (intro.) The definitions contained in ehs. ch. NR 400 and 445 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 80. NR 468.20(1)(b) Note is repealed.

SECTION 81. NR 484.04(23) is amended to read:

CFR Appendix Referenced	Title	Incorporated by Reference For
NR 484.04		
(23) 40 CFR part 61 Appendix B	Test Methods	NR 400.02(131) NR 439 <u>NR 445.02(9m)</u> NR 446 to NR 469

SECTION 82. NR 484.05(1) is amended to read:

Document Reference	Document Title	Incorporated by Reference For
NR 484.05		
(1) NTIS Order No. PB 87-100012	Standard Industrial Classification Manual, 1987	NR 400.02(74) NR 400.02(86) NR 400.02(91) NR 400.02(149) NR 405.02(8) NR 407.02(4)(intro.) NR 407.05(4)(b) NR 408.02(5) NR 410.02(4) NR 421.02(3) NR 421.02(17) NR 422.02(112) NR 422.095(1) NR 422.15(1)(intro.) NR 438.02(1) <u>NR 445.10(1)(intro.)</u> NR 465.02(51)

SECTION 83. NR 484.11(2)(b) is amended to read:

Document Number	Title	Incorporated by Reference For
NR 484.11(2)		
(b) ISBN:0-936712-86-4	1990-1991 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices	NR 445.04(4)(a)1. NR 445.04(4)(a)2. NR 445.04(4)(b) NR 445.04(4r)(b)4. NR 445.05(4)(a)1. NR 445.05(4)(a)2. NR 445.05(4)(b) NR 445.05(4r)(b)4. <u>NR 445.06(4)</u>

SECTION 84. NR 484.11(2)(c) and (8)(b) are created to read:

Document Number	Title	Incorporated by Reference For
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NR 484.11(2)
(c) ISBN:1-882417-36-4 2000 Threshold Limit Values for Chemical
Substances and Physical Agents and Biological
Exposure Indices NR 445.07(1)(b)(intro.)
NR 445.07(5)(d)2.
NR 445.14(3)

(8)(b) ISO 14001 Environmental management systems -
Specification with guidance for use NR 400.02(61g)

The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

The rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Darrell Bazzell, Secretary

(SEAL)